

# Futaba®



2.4GHz  
**F.A.S.T.**™

We Put the Future of R/C in Your Hands™



# READY FOR 2.4GHz?



## SO IS FUTABA — WITH THE ONLY R/C SYSTEMS AND ACCESSORIES BACKED BY YEARS OF EXPERIENCE WITH 2.4GHz TECHNOLOGY.

When you choose a Futaba 2.4GHz FASST system or module/receiver set, you've selected a fully tested, well-engineered, totally reliable product — one that's absolutely ready to give demanding R/C hobbyists the performance they deserve.

Our hands-on experience with 2.4GHz technology stretches back 15 years, long before anyone considered it for hobby applications. That's when engineers in Futaba's industrial R/C division — designers of radio-control tools for construction, civil engineering, and similar uses — began using and perfecting their own 2.4GHz equipment.

Those same engineers were brought in to share their knowledge as soon as we saw the potential for 2.4GHz in R/C modeling. No other radio manufacturer had such an instant supply of expertise.

When it comes to getting the full benefits of 2.4GHz technology, you'll find that Futaba's experience makes all the difference. Ask competitors such as driver Taylor James, who has already racked up multiple wins with Futaba's 3PK 2.4GHz...or pilot Jason Shulman, who says "the fast response and glitch-free performance are unbelievable!"



## ADVANTAGES OF FUTABA FASST 2.4GHz SYSTEMS:

### **CONTINUOUS CHANNEL SHIFTING**

Other 2.4GHz systems hold firm to one or two frequencies, increasing the potential for interference. The frequency of Futaba 2.4GHz FASST shifts every two milliseconds — or 500 times per second! There are no signal conflicts or interruptions, and there's no need for a frequency pin.

### **DUAL ANTENNA DIVERSITY**

Futaba 2.4GHz FASST systems seamlessly select the best reception between two receiver antennas, so there's no loss of signal.

R603FF receiver included with 3PM 2.4GHz does not offer Dual Antenna Diversity.

### **PRE-VISION™**

2.4GHz FASST scans incoming data and applies sophisticated error correction techniques — resulting in a system that gives you a solid, impenetrable connection with your model.

### **EASY LINK™**

Futaba 2.4GHz FASST system transmitters leave the factory with a unique and permanent ID code. Once linked to the receiver, the code ensures that the receiver will recognize and respond **ONLY** to that transmitter. The linking process is simple... just push a button on the receiver.

Patent # 6,141,392



## 100x Faster Antenna Switching

If the receiver notices a problem with the data coming into one antenna, it rapidly switches to the other, looking for the sharpest signal.

Comparing the R606FS receiver to the AR600 receiver.

## Stronger, More Robust Link

Futaba doesn't need redundant receivers. Instead, we use a proven combination of Channel Shifting and Dual Antenna Diversity (DAD) to provide a robust, highly dependable link between transmitter and receiver.

## Custom-Developed IC Chips

Futaba uses custom IC chips that have been designed specifically for radio-control — ensuring quality, reliability, and security. This is why Futaba FASST systems are faster and more reliable than the competition.



## Compact, "All-in-One" Receivers

Futaba's small, powerful 2.4GHz FASST R607FS receivers for flight systems can control giant-scale models as easily as park flyers and weigh a scant 7 grams without case. Full-range systems from other manufacturers include a bigger, two-piece receiver, and you must purchase a smaller park flyer receiver separately.



## Over 2x Less Minimum Latency

Latency is the elapsed time between your movement of the transmitter controls and servo response. In Futaba 2.4GHz FASST systems, that response can happen over twice as fast — so you feel less like you're "out in front" leading your model, and more like you're inside driving or flying it.

Comparing the 6EX FASST system to the DX7.



## Hassle-Free Fail-Safe

Futaba 2.4GHz's fail-safe is programmed right through the transmitter on the 6EX, just like on conventional systems. Other radios require a complicated six-step process to set up their fail-safe, along with a separate binding plug that can easily be misplaced.

## There's no better match for Futaba than Futaba.

Futaba put an incredible amount of thought into how well our 2.4GHz FASST components work together. With Futaba 2.4GHz modules, you simply plug into the module port just like you've done for every module you own. Connections are a snap, and you can still pivot the antenna to maximize your RF link.



# 14MZ

## 14-CHANNEL COMPUTER RADIO

It is the finest radio Futaba has ever made — and it's designed for the pilot who wants the very best.

It can be programmed with a touch or by using a rotary dial to instantly pull up any one of 30 digitally precise model memories. But more importantly, the 14MZ can coax the last possible fraction of perfection from performance you previously considered unbeatable.

You can add your own audio and picture files, tailor switch location, style and function to your preference and enjoy up to three hours of flying time before recharging your transmitter pack.

The future is now. Grab it with the 14MZ.



### 14MZ Overview

- Transflexive, 640 x 240 HVGA Display w/ adjustable contrast and backlighting.
- Expandable, 30-model Flash-ROM memory
- Functions per menu: 7 (system); 16 (linkage); 16 (airplane); 15 (heli)\*\*
- 9 flight conditions
- 6 digital trims
- 4 slider switches (2 side-mount; 2 front/back accessible)
- Touch screen stylus, cleaner, hex wrenches & neck strap

### 14 Specifics

- Equipped with dual internal processors: Windows® CE for set-up/programming tasks; Futaba for flight control functions.
- Dual programming methods: "Touch n' Go"™ touch screen or rotary dial and direct select buttons
- Included, 32MB Compact Flash Card can be used to: download/store images; record/play back sound files & voice prompts; & expand memory to 100 models

- Switch customizing lets you pull out existing shoulder switches and replace with: tall; short; button; toggle; spring-loaded or positionable switches

\*\* = minimum number of functions shown.



### 12Z/14MZ System Overview

- G3 2048™ resolution for Real-Time Response™
- Fully synthesized for crystal-free operation and all-channel access
- Backwards compatible with FM/PPM & PCM 1024 systems (requires appropriate module)
- Assignable switches/functions
- Expandable, multi-model memory
- Model clear, copy & naming
- Airplane/glider & heli software
- 10 programmable mixes
- Servo reversing, servo center & EPA (all channels)
- 6 factory-preset Variable Dual Rates™
- Servo Grouping™ for multi-servo synchronization
- Software for Mode 1-4 control setups
- Gimbals with quad bearings and long-life potentiometers
- Sticks w/adjustable length, tension and detent
- 8 shoulder switches
- 3 rotary dials
- 7.4V, 2200mAh Lithium Ion Tx and 4.8V, 1500mAh NiCd batteries
- 7-color status LED for at-a-glance reference
- Charging, DSC & trainer jacks
- Includes Free Membership in Futaba Flyers Club, plus deluxe metal carrying case, wall charger, neck strap, DSC cord and rubber grips

Stock #	System	Mode	Modulation	Band	Receiver	Servos	Rx Battery	Tx Battery
FUTK9400	14MZAP FASST	2	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTK9401	14MZHP FASST	2	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTK9402	14MZAP FASST	1	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTK9403	14MZHP FASST	1	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9412+	FX-40	2	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9416+	14MZAP	2	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9418+	14MZHP	2	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9422+	14MZAP	2	PCMG3	50MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9424+	14MZHP	2	PCMG3	50MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9426+	14MZAP	1	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9428+	14MZHP	1	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon

+ = Synthesized **Note:** Battery part numbers: NR4F1500 (1500mAh NiCd); FLT2F2200 (2200mAh Lilon)



# 12Z

## 12-CHANNEL COMPUTER RADIO

The performance and programming potential of the 12Z rivals that of the 14MZ, but the value it offers is uniquely astonishing. For the pilot who values function above all else, the 12Z emerges as a sound investment in terms of cost and a luxurious indulgence in the best that a flight system can be.

### 12Z Overview

- 300 x 128 LCD w/adjustable contrast
- Dial 'n Key™ jog dial programming
- Expandable, 25-model EEPROM memory
- Functions per menu: 8 (system); 14 Airplane/16 Heli (linkage); 14 (airplane); 17 (heli)
- 8 flight conditions
- 4 digital trims (4 basic channels)
- 2 slider switches

### 12Z/14MZ Specifics

- Variable Dual Rates can be assigned to any function in any configuration. They can be combined with Expo and activated automatically, without program mixing, by bringing a specific function on-line
- Ultra-fine, 0.5% setting increments for precision set-up & "quick-step" mode for multi-increment advancement
- Online updates function allows you to download system advancements and enhancements on the Internet
- Engine mixing option offers virtually unlimited synchronizing capabilities for up to four engines
- Factory-preset functions and shortcuts include two dozen model types: 7 wing, 6 flying wing and 3 tail types for airplanes, plus 8 swash types for helis



**WFSS™** Advanced Ball Grid Array (BGA) layered PC board helps make the R5114DPS the world's most compact 14-channel synthesized receiver. Crystal-free WFSS (Wireless Frequency Setting System) allows frequency changes direct from the transmitter.

Available on all 50 & 72MHz versions of the 12Z and 14MZ.



### 12Z Specifics

- Includes two Futaba processors: one for flight control; one for set-up/ programming.
- "Joystick" button simplifies and speeds menu navigation.
- 32MB Compact Flash Card (sold separately) expands memory to 245 models.
- Back plate-mounted slider switches offer fingertip control



Stock #	System	Mode	Modulation	Band	Receiver	Servos	Rx Battery	Tx Battery
FUTK9300	12MZAP FASST	2	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTK9301	12MZHP FASST	2	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTK9302	12MZAP FASST	1	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTK9303	12MZHP FASST	1	FASST	2.4GHz	R6014FS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9316+	12ZAP	2	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9318+	12ZHP	2	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9322+	12ZAP	2	PCMG3	50MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9324+	12ZHP	2	PCMG3	50MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9326+	12ZAP	1	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon
FUTJ9326+	12ZHP	1	PCMG3	72MHz	R5114DPS	—	1500mAh NiCd	2200mAh Lilon

+ = Synthesized **Note:** Battery part numbers: NR4F1500 (1500mAh NiCd); FLT2F2200 (2200mAh Lilon)

[www.2.4gigahertz.com](http://www.2.4gigahertz.com)



# 12FG

## 12-CHANNEL COMPUTER SYSTEMS

Four **FASST**™ Systems!

### The perfect choice for more and more pilots.

A popular choice, and for obvious reasons: the 12FG makes channel synthesis and Futaba's best in programmable precision more affordable in more ways than ever before. You can choose from 6 fully synthesized PCM systems and four others that offer the cutting-edge dependability of 2.4GHz technology.

*The choices are yours — and they're all from Futaba.*

**Boost model memory to 1,882 with a 1GB SD Card from your local electronics store!**

### 12FG System Overview

- G3 2048™ resolution
- Servo Grouping™
- Real-Time Response™
- 6 Variable Dual Rates™ (VDR)
- Dual Antenna Diversity™ (DAD)\*
- 2 slider switches (front/back access)
- 2 rotary dials
- Assignable switches/functions
- "Full Functionality" trainer system
- Dial 'n Key™ programming w/function select/set button
- Menus/functions – System (6); Linkage (14 air; 16 heli); & Model (13 air, 16 heli)
- Airplane, sailplane & heli software
- Online updates/downloads
- 30-model Flash-ROM memory
- 8-character model naming
- Model clear/copy/re-set
- 8 flight conditions (7 + default)
- 10 "free" mixes
- 255 x 96 LCD w/adjustable contrast
- Digital trims w/auto memory (6 ch.)
- Dual/triple rates, servo centering, servo reversing, exponential & endpoint adjustment (all channels)
- DSC & fail-safe



### 12FG System Specifics

- Backwards-compatible with all PCM and FM/PPM receivers
- FM/PPM, PCM1024 & G3 2048 transmission modes
- Shortcuts to factory-preset functions
- 0.5% settings increments, plus "Fast Forward" feature
- Combined airplane/sailplane software
- Preset functions: 7 wing/6 flying wing/3 tail types (for fixed-wing craft); 8 swash types (helis)
- Variable rate/exponential single switch option
- Additional features: elapsed time counter; dual, independent up/down timers; quad bearing gimbals; stick customizing; LED battery indicators; heavy-duty switch harness; neck strap; Tx & Rx batteries; charger & charging jack.

\* = Only on 2.4GHz systems

Stock #	System	Mode	Modulation	Bands	Tx Module	Servos	Receiver	Rx Battery	Tx Battery
FUTK9275	12FGA FASST	2	FASST	2.4GHz	TM-14	—	R6014FS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTK9276	12FGH FASST	2	FASST	2.4GHz	TM-14	—	R6014FS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTK9277	12FGA FASST	2	FASST	2.4GHz	TM-14	—	R6014FS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTK9278	12FGH FASST	2	FASST	2.4GHz	TM-14	—	R6014FS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTJ9200+	12FGAP	2	PCM G3	72MHz	MZ-FM**	—	R5114DPS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTJ9201+	12FGHP	2	PCM G3	72MHz	MZ-FM**	—	R5114DPS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTJ9205+	12FGAP	2	PCM G3	50MHz	MZ-FM**	—	R5114DPS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTJ9206+	12FGHP	2	PCM G3	50MHz	MZ-FM**	—	R5114DPS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTJ9210+	12FGAP	1	PCM G3	72MHz	MZ-FM**	—	R5114DPS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH
FUTJ9211+	12FGHP	1	PCM G3	72MHz	MZ-FM**	—	R5114DPS	NR4F1500 1500mAh NiCd	HT6F1700B 1700mAh NiMH

+ = Synthesized System \*\* = MZ-FM not available separately.



# 9C SUPER

## 9-CHANNEL COMPUTER SYSTEMS

### Sophisticated systems for flight and surface use

For some modelers, the 9C's best feature is the amazing depth and breadth of the things it can do. For others, it's the ability to tap the 9C's full potential with "Dial 'n Key" programming ease. For still others, it's how the 9C synthesized versions eliminate the hassle of dealing with crystals. But with every 9C featuring a 16K CAMPac Module as standard equipment, all modelers can agree on at least one thing: Futaba's 9C delivers more value and versatility for the dollar than ever before.

#### Glider Mode

- Three other offsets (launch, thermal and speed) besides basic offset, with customized camber for each
- The four camber mixes can be programmed to any variable dial, and set up on one screen
- Any R/C aircraft — especially those with 4-servo wings — will benefit from the 9C Super's built-in flexibility and set-up ease

#### Airplane Mode

- You can set up a 2-rate (Up/Down) or 3-rate (Up/Center/Down) GYA gyro system with a selectable switch and channels 5, 7 or 8
- The Air Brake is now switch-selectable

#### Heli Mode

- Throttle Curve and Pitch Curve now feature a delay for smoother transition from hover to idle-up
- The throttle hold and idle-up can be assigned to any switch for more comfort

*All three modes  
are enhanced!*



**Get the 9C system that'll help you get the most out of your model.**

#### 9C Helicopter Systems

With 9C heli systems, you can program: 1) gyro sensitivity level; 2) governor speed; and 3) rate of servo travel for up to 4\* conditions — and let the 9C automatically change settings when you change conditions.

\*5 conditions on gyro sensitivity

#### 9C Surface System

The 9C surface system offers the programming ease and versatility of 9C flight systems on 75MHz with PCM modulation. It's ideal for battling robots, marine masterpieces, big rigs and super-sized custom control applications.

#### 9C Super PCM w/Synthesized Tx Module & R319DPS Rx

It has all the benefits of the 9C — and more. Simply turn two dials on the synthesized transmitter module and adjust two pots on the synthesized receiver, and select any free 72MHz channel without installing crystals.



All 9C systems include a 16K CAMPac module which boosts total memory to 18 models!



**Dial 'n Key™:** computer programming at its best! Just rotate the dial to find the program you want. Press the dial to open it and use the dial and cursor keys to set values.

Stock #	System	Mode	Modulation	Bands	Tx Module	Servos	Rx	Rx NiCd	Tx NiCd
FUTK75**	9CAF*	2	FM	50,72MHz	TP-FM	—	R148DF	NR4J 600mAh	NT8S700B 700mAh
FUTK76**	9CHF*	2	FM	50,72MHz	TP-FM	—	R148DF	NR4RB 1000mAh	NT8S700B 700mAh
FUTK77**	9CAP	2	PCM	50,72MHz	TP-FM	—	R149DP	NR4J 600mAh	NT8S700B 700mAh
FUTK78**	9CHP	2	PCM	50,72MHz	TP-FM	—	R149DP	NR4RB 1000mAh	NT8S700B 700mAh
FUTK85**	9CAF*	2	FM	50,72MHz	TP-FM	(4)S3151	R148DF	NR4J 600mAh	NT8S700B 700mAh
FUTK86**	9CHF*	2	FM	50,72MHz	TP-FM	(4)S3151	R148DF	NR4RB 1000mAh	NT8S700B 700mAh
FUTK87**	9CAP	2	PCM	50,72MHz	TP-FM	(3)S9252 (1)S3151	R149DP	NR4J 600mAh	NT8S700B 700mAh
FUTK88**	9CHP	2	PCM	50,72MHz	TP-FM	(4)S9252	R149DP	NR4RB 1000mAh	NT8S700B 700mAh
FUTK89**	9CAP*	2	PCM	75MHz	TP-FM	(2)S3151	R138DP	NR4J 600mAh	NT8S700B 700mAh
FUTK9200	9CAPS+	2	PCM	72MHz	TP-FSM	—	R319DPS	—	NT8S700B 700mAh
FUTK9205	9CHPS+	2	PCM	72MHz	TP-FSM	—	R319DPS	—	NT8S700B 700mAh
FUTK9210	9CAPS+	1	PCM	72MHz	TP-FSM	—	R319DPS	NR4J 600mAh	NT8S700B 700mAh
FUTK9211	9CHPS+	1	PCM	72MHz	TP-FSM	—	R319DPS	NR4RB 1000mAh	NT8S700B 700mAh

\* = Transmits on 8 channels; + = Synthesized

[www.futaba-rc.com](http://www.futaba-rc.com)



# 7C

## 7-CHANNEL COMPUTER SYSTEMS

Choose From 4 **FASST** Systems!

### Incredible sport radio systems – many with digital servos!

- It's the perfect system for intermediate-level pilots – incredible 9-channel performance features combined with 4-channel programming ease!

Thanks to its unsurpassed combination of value, form and function, the 7C is guaranteed to satisfy virtually all intermediate-level desires. All 7C systems feature the ease of Dial 'n Key™ programming to let users access an enormous range of functions. Best of all, the foolproof layout features a Basic menu for simple set-ups while the Advanced menus present a variety of tasks for more complex models.

### 7C System Overview

- 10-Model memory
- 6-Character model naming
- Digital trims, trim memory, end point adjustment (EPA), sub trims and servo reversing (all channels)
- Dual or triple rates\* (aileron/elevator/rudder)
- Exponential (aileron/elevator/rudder/throttle)
- Adjustable throttle cut
- Fail-Safe (PCM and FASST™ modulation only)
- Trainer system (cord required)
- Flap switch
- Retract switch
- Variable rate knob (channel 6)
- Tx and Rx NiCds w/dual-output charger
- Sticks w/length and tension adjustment
- Software for Mode 1-4 control set-ups
- Timer – countup/countdown

\* = with 3-position switch use



With Futaba's innovative Dial 'n Key, just rotate the dial to find the program you want and press it to open the program. Use the dial and cursor keys to set values.



#### Airplane Advanced Menu

- 3 programmable mixes
- Flaperon
- Flap Trim
- Air Brake
- Elevator to Flap mixing
- Flap to Elevator mixing
- V-Tail Mixing
- Elevon Mixing
- Aileron to Rudder mixing
- Snap Roll
- Dual Elevator Servos (FASST versions only)

#### Helicopter Advanced Menu

- 3 programmable mixes
- Throttle curve (5-point N=normal, idle up 1 & 2)
- Pitch curve (5-point normal, idle up 1 & 2)
- Revo mixing
- Gyro mixing
- Hovering throttle
- Hovering pitch
- Throttle hold
- Trim offset (aileron/elevator/rudder)
- 6 Swash plate set-ups (5 CCPM options)
- Governor select and swash to throttle mixing (FAAST versions only)

Stock #	System	Mode	Modulation	Bands	Servos	Receiver	Rx NiCd	Tx NiCd
FUTK7000	7CA FASST	2	FASST	2.4GHz	(4) S3152	R607FS	NR4J 600mAh	NT8S600B 600mAh
FUTK7001	7CH FASST	2	FASST	2.4GHz	(4) S3152	R607FS	NR4RB 1000mAh	NT8S600B 600mAh
FUTK7002	7CA FASST	2	FASST	2.4GHz	(4) S3004	R607FS	NR4J 600mAh	NT8S600B 600mAh
FUTK7003	7CH FASST	2	FASST	2.4GHz	(4) S3001	R607FS	NR4RB 1000mAh	NT8S600B 600mAh
FUTJ69**	7CAF	2	FM	72MHz	(4) S3004	R168DF	NR4J 600mAh	NT8S600B 600mAh
FUTJ70**	7CAF	2	FM	72MHz	(4) S3151	R168DF	NR4J 600mAh	NT8S600B 600mAh
FUTJ71**	7CAP	2	PCM	72MHz	(4) S3151	R138DP	NR4J 600mAh	NT8S600B 600mAh
FUTJ73**	7CHF	2	FM	72MHz	(4) S3151	R168DF	NR4RB 1000mAh	NT8S600B 600mAh
FUTJ74**	7CHP	2	PCM	72MHz	(4) S3151	R138DP	NR4RB 1000mAh	NT8S600B 600mAh

### 7C System Specifics

- Selectable FM/PCM Modulation (72MHz systems only)
- Software for airplanes and helis
- Assignable Switches/Functions
- Mode 1-4 selectable (modes 3 and 4 available through the transmitter software)
- Large, 72 x 32 LCD screen with adjustable contrast
- Versions range from an FM aircraft system with standard servos (FUTJ69\*\*) to 2.4GHz systems with digital high-torque servos (FUTK7000/FUTK7001)



# 6EX

## 6-CHANNEL COMPUTER SYSTEMS

### Choose from four 72MHz 6EXP systems and three 2.4GHz 6EX radios!



The advantages 6EX systems offer are clear...and numerous. The wide range of proven features from the ground-breaking original is one; affordable price runs a close second. But there's also software for airplanes and helis. Suitability to virtually any pilot, from first-timers to long-time fliers. High-definition LCDs, easy, go-with-the-flow programming, digital trims — and a host of attractive choices.

Both systems are available with servos for fixed-wing pilots and heli pilots, as well as in versions that offer the pilot total freedom of servo choice. 6EXP systems offer you the option for FM/PPM or PCM transmission. 6EX systems, on the other hand, offer the undeniable reliability, interference-free operation and "locked in" feel of Futaba's proven FASST™ technology.

### 6EX System Overview

- 6-model memory
- 4-character model naming
- Simple 1 lever/2 button programming
- LCD
- Data clear & reset
- Digital trims w/auto memory (4 channels)
- EPA and servo reversing (all channels)
- Dual rates & exponential (ail/ele/rud)
- Throttle fail-safe (PCM only & FASST only)
- Throttle kill button (adj.)
- Trainer system (cord required)
- Flap switch
- Retract switch
- Dual-rate switch
- Tx NiCd & dual output charger
- Sticks w/length adjustment
- Software for Mode 1-4 control set-ups
- Low battery and mixing alarms
- FM/PPM or PCM selectable (6EXP only)
- Single-switch control of dual rates and expo



#### Airplane Menu

- 2 programmable mixes
- Flaperon
- V-tail mixing
- Flap Trim
- Elecon mixing

#### Helicopter Menu

- Throttle hold
- Gyro mixing
- Revo mixing
- Throttle curve (5-point, normal & idle-up)
- Pitch curve (5-point, normal & idle-up)
- Swash-to-throttle mixing
- 3 swash plate types (independent, plus 90° and 120° CCPM)

Stock #	System	Modulation	Band	Servos	Receiver	Rx Battery	Tx Battery
FUTK6900	6EXAH FASST	FASST	2.4GHz	—	R606FS	NR4J 600mAh	NT8F600B 600mAh
FUTK6901	6EXA FASST	FASST	2.4GHz	(4) S3004	R606FS	NR4RB 1000mAh	NT8F600B 600mAh
FUTK6902	6EXH FASST	FASST	2.4GHz	(4) S3001	R606FS	NR4J 600mAh	NT8F600B 600mAh
FUTK62**	6EXP	FM	72MHz	—	R168DF	NR4RB 1000mAh	NT8F600B 600mAh
FUTK63**	6EXP	FM	72MHz	—	R156F	NR4J 600mAh	NT8F600B 600mAh
FUTK64**	6EXP	FM	72MHz	(4) S3004	R168DF	NR4RB 1000mAh	NT8F600B 600mAh
FUTK65**	6EXP	FM	72MHz	(4) S3001	R168DF	NR4J 600mAh	NT8F600B 600mAh

Legend: A = Airplane; AH = Airplane and Heli; H = Heli

# 4YF

## 4-Channel System

### Entry-level ease – Advanced-level performance!

Since its introduction, beginners and experts alike have been impressed by the way the 4YF SkySport offers pilots dependable 4-channel performance for the cost of a 2-channel system. Genuine Sanyo® NiCds and a 1-year warranty are just a few reasons why the versatile Futaba 4YF has become virtually every flyer's favorite!

### 4YF System Overview

- FM signal clarity
- Ergonomic, slim-line case
- Trainer system
- Spring-loaded trainer switch
- Red/Green battery status LEDs
- Knurled sticks w/length and tension adjustments
- Tx NiCd w/dual-output charger
- Servo reversing (all channels)
- Adjustable trims (all channels)

Stock #	System	Modulation	Bands	Servos	Rx	Rx NiCd	Tx NiCd
FUTJ36**	4YF Micro	FM	72MHz	(2)S3114	R114F	—	NT8F600B 600mAh
FUTJ38**	4YF Micro Lite	FM	72MHz	(2)S3109M	R124F	—	NT8F600B 600mAh
FUTJ40**	4YF	FM	72,75MHz	(4)S3004	R168DF	NR4QB 600mAh	NT8F600B 600mAh



# 4EXA

## 4-Channel ComputerSystem

### Expand to greater heights of dependability!

The perfect way to progress from basic 4-channel radios into the added ease and versatility of a 4-channel computer system. The 4EXA provides a trouble-free transition. Thanks to four-model memory, plus unrivaled set-up and performance features, this computer system gives pilots features sport systems only dream of offering.

### 4EXA System Overview

- FM signal clarity
- Simple 2 button/1 lever set-up
- Mode 1-4 stick set-up
- 4-model memory
- Data reset
- Digital trims w/automatic trim memory; servo reversing and end point adjustment (all channels)
- Exponential (aileron/elevator/rudder)
- Wing mixing (V-tail, elevon)
- 40-segment LCD screen
- Trainer system (cord required)
- Low battery alarm
- Transmitter NiCd and dual-output charger
- Rx NiCd
- Charge jack
- Sticks w/length adjustment

Stock #	System	Modulation	Bands	Servos	Rx	Rx NiCd	Tx NiCd
FUTK40**	4EXA	FM	72, 75MHz	(4)S3004	R168DF	NR4QB 600mAh	NT8F600B 600mAh





## 2DR & 2ER 2-Channel Systems



2DR



2ER

To some modelers, using both hands to support and control a radio just feels right. For them, these 2-stick systems are the perfect choice. The 2DR is ideal for operating R/C boats and vehicles, while the 2ER is great for sailplanes. Shorter control sticks on both systems allow smaller hands a chance to enjoy a full range of movement.

### 2DR & 2ER System Overview

- Steering and throttle control
- Trims (throttle and steering)
- 2-Channel servo reversing
- Battery status LEDs
- Ergonomic case with molded-in carrying handle
- 2ER available on 72MHz for sailplane use

Stock#	System	Modulation	Bands	Servos	Receiver
FUTJ22**	2DR	AM	75MHz	(1) S3003,(1) S3802	R132JE
FUTJ23**	2DR	AM	75MHz	(1) S3003,(1) S3801	R132JE
FUTJ25**	2DR	AM	27/75MHz	(2) S3003	R132JE
FUTJ46**	2ER	AM	72MHz	(2) S3003	R122JE

## 3FR 3-Channel System

### Single-stick simplicity for sport!

The 3FR is designed to mold itself to the hand's contours and mechanics and priced to make it a perfect fit in any budget. Mixing is available at the flip of a switch — and control for throttle, spoilers or flaps is right at your fingertip.

### 3FR Overview

- V-Tail & elevon mixing (On/Off)
- Single-stick control
- Proportional 3rd channel
- Servo reversing (Channel 1 & Channel 2)
- Trims (Channel 1 & Channel 2)
- Battery status LEDs
- NiCd charge jack

Stock#	System	Modulation	Bands	Servos	Receiver
FUTJ51**	3FR	AM	72MHz	(2) S3003	R114H



## 4VWD 4-Channel Surface System

Imagine it, and with the 4VWD you can make it happen. Along with two channels for throttle and steering control you also have two more to bring your model to life. From trimming the sails on a yacht to commanding the treads and armament on a tank to shifting the gears on a big rig — even controlling the subtle movements of a robot — the 4VWD is the system that puts you in total control.

### 4VWD System Overview

- Four proportional channels
- Trims (all four channels)
- 4-Channel servo reversing
- Adjustable stick length and tension
- Battery power meter
- Ergonomic case with molded-in carrying handle
- Special gate for throttle stick duplication of tank shift pattern

Stock#	System	Modulation	Bands	Servos	Receiver
FUTJ60**	4VWD	AM	27MHz	(2) S3004	R124H





# 4PK

## 4-CHANNEL COMPUTER SYSTEMS

**Where form, features and functionality come together to create the premier racer's radio.**

It's the system designed for dominance — both literally and figuratively. The 4PK's contemporary styling is not only unique, it's extremely well-balanced and ergonomic. Add to that comfort the fact that the transmitter weighs only 1.5 pounds, and you've got a radio that fights hand fatigue all the way to the end of a grueling main. Besides the repositionable wheel, you can also adjust the trigger location to fit your finger — another great "feel" feature. Programming pluses include 40-model memory, 10-character naming, super-sensitive 2048 resolution...and a 4th channel that's ideal for adjusting front and rear brake bias in larger vehicles. Oh, there's also this: the 4PK was designed from the beginning as a spread spectrum system. That means that there's no module to worry about, a state-of-the-art receiver is included, and all of the incredible advantages of FASST system technology are at your command.



**Instantaneous response gives racers cutting-edge control!**

*Not only is the backlit LCD screen large enough for easy reading without eye strain, it's also angled for instant viewing without having to tilt the transmitter.*

*The redesigned keypad features a large 4-direction jog button for quick access and scrolling. Important functions can be assigned to buttons on the wheel housing to keep them within easy reach.*

*The trigger position can also be shifted, by as much as 7 mm. This allows you to customize the radio for sharper response based on finger size.*

*Much consideration went into the design of the 4PK's grip, which is slightly thicker to accommodate larger hands. Besides being lighter, the transmitter's weight is well-balanced for added comfort.*



*Achieve perfect "feel" in seconds with the Advanced Positioning Adapter. You can drop the wheel down, move it left or right, even change the angle — a feature that many drivers have requested.*

Stock #	System	Modulation	Band	Receiver	Tx NiMH
FUTK4900	4PK FASST	FASST	2.4GHz	R604FS	1700mAh



## 4PK System Overview

- Ergonomic design for balance, feel, weight and adjustability
- 40-model memory
- 10-character model naming
- 4th channel for adjusting brake bias
- 2 programmable mixes
- Assignable buttons and dials
- Digital trims and dials
- Advanced Positioning Adapter (APA)
- Adjustable trigger location
- Backlit 128 x 64 white LCD screen with adjustable contrast
- Subtrims, servo reversing and EPA on all channels
- Throttle Variable Trace Rate (VTR)
- Fail-safe and battery fail-safe (voltage selectable)
- Direct Servo Control (DSC)
- Exponential & adjustable servo speed (Steering/Throttle)
- Up/Down, lap & systems timers
- 100-lap memory
- Electronic & mechanical ATL (Adjustable Throttle-Low side only)
- Traction control/Acceleration rate
- ABS braking system
- Boat mixing
- Idle-up
- Tx NiMH and dual-output charger

## 4PK Specifics

- "New Driver", "Race-Ready", "Expert" and "Big Car" menus that add functions based on driving skill level and experience
- Throttle Mode Select, for selecting acceleration/brake servo neutral points between 70/30 for nitro or 50/50 for electrics
- Redesigned keypad with large center jog button
- Vibrating alert system
- "Direct Select" single-button access to eight preassigned functions
- Navigation Lap Timer that sounds when target lap time is exceeded
- Servo Display Screen shows set-ups/mixes for individual servos (Expert Menu)
- Throttle programming options, including 5-point curve, expo and VTR

**40-MODEL MEMORY**

**THROTTLE VARIABLE TRACE RATE (VTR)**

**VIBRATING ALERT SYSTEM (VAS)**



**Enjoy all of the benefits of FASST system technology!**



Even faster response than the 3PK!

No NiCd battery here — the 4PK comes with an 1700mAh NiMH transmitter pack that's comparable in size, but with almost twice the capacity. That means about TWO HOURS of operation on a single charge...enough for the longest of mains.



The included R604FS receiver features Dual Antenna Diversity (DAD) for reliability and security. Its compact size (1.54 x 1.02 x .55 inches) and weight (0.49 ounces) lets you use it in the tightest installations.

Also compatible with R603FS and R603FF receivers

## Servo Recommendations by application

Category	Steering	Throttle
1/8 On-road	BLS351/S9350/S9351	BLS451/S9350/S9351
1/8 Off-road	BLS351/S9350/S9351	BLS451/S9350/S9351
1/10 Nitro	BLS351/S9452	BLS451/S9350/S9351
1/10 Electric	BLS451/S9452	ESC
1/12 Electric	S9650	ESC
1/4 & 1/5 Gas	S5050	S9350/S9351

# 3PK SUPER & SUPER SYNTHESIZED 3-CHANNEL COMPUTER SYSTEMS

## High end performance for serious racers.

In top-level racing, speed and accuracy are everything. And with the 3PK, you have everything you need to succeed, right in the palm of your hand.

Add digital servos to the 3PK versions with R203HF or R303FHS receiver, transmit on HRS modulation, and you'll enjoy blink-of-an-eye response. The R303FHS receiver also adds channel synthesis. That means ONE radio for on-road, off-road, electric or nitro racing — and without changing crystals! Plus, by just turning on the transmitter, the R303FHS receiver automatically identifies and adapts to the modulation in use.

## 3PK System Overview

- FM/PPM/HRS modulation (27, 75MHz systems only)
- Expandable, 20-model memory
- 10-character model naming
- Assignable switches and dials
- Digital trims and dials
- Automatic trim and dial memory
- Advanced Positioning Adapter (APA)
- "MC Setup" (adapts ESCs to higher HRS frame rates)
- Backlit 128 x 64 LCD screen with adjustable contrast
- All programming options contained on two screens
- 2 programmable mixes
- Subtrims, servo reversing and EPA on all channels
- Fail-safe and battery fail-safe (HRS, PCM & FASST modulation only)
- DSC (Direct Servo Control)
- Exponential & adjustable servo speed (steering/throttle)
- Up/down, lap & systems timers
- ATL (electronic & mechanical)
- Traction control/acceleration rate
- ABS braking system
- Idle-up
- Tx NiCd and dual-output Charger
- Right-/left-hand convertible

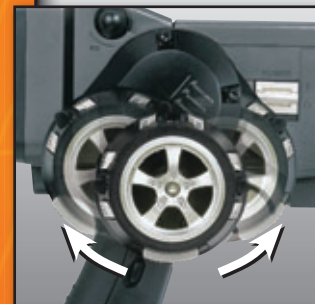
## 3PK Specifics

- "New Driver", "Race-Ready", "Expert" and "Big Car" menus that add functions based on driving skill level and experience
- Throttle Mode Select, for selecting acceleration/brake servo neutral points between 70/30 for nitro or 50/50 for electrics
- Redesigned keypad with large center jog button
- Vibrating alert system
- "Direct Select" single-button access to six preassigned functions
- Navigation Lap Timer that sounds when target lap time is exceeded
- Servo Display Screen shows set-ups/mixes for individual servos (Expert Menu)
- Throttle programming options, including 5-point curve, Expo and VTR



A 16K CAMPac Data Storage Module lets you store up to 8 set-ups for copying, storage or transfer to another system. Sold separately.

**FUTM9405** CAMPac 8 Data Module 16K  
**FUTM5547** FTA-17 Large Hand Grip 3PK  
**FUTM1468** NT8F1100B 9.6V 1100mAh NiCd Tx Battery



With the Advanced Positioning Adapter, the wheel can be dropped or rotated to achieve perfect "feel" in seconds.

Stock #	System	Modulation	Band	Tx Module	Receiver	Tx NiCd
FUTK2015	3PK FASST	FASST	2.4GHz	FASST	R603FS	NT8F700B 700mAh
FUTK25**	3PK Super	FM/PCM/HRS	75MHz	PK-FM	R203HF	NT8F700B 700mAh
FUTK26**	3PK Super	PCM	75MHz	PK-FM	R113iP	NT8F700B 700mAh
FUTK2010	3PK Tx	FM/PCM/HRS	—	—	—	NT8F700B 700mAh
FUTK2050+	3PK Syn.	FM/PCM/HRS	27MHz	PK-FSM	R303HFS	NT8F700B 700mAh
FUTK2055+	3PK Syn.	FM/PCM/HRS	75MHz	PK-FSM	R303FHS	NT8F700B 700mAh

+ = Synthesized



## Customize to your heart's content with the 3PK Transmitter Only.

Get all the 3PK's great features — plus incredible flexibility to utilize a wide variety of receivers, modules and servos to perfectly fit your specific application — when you go with the 3PK Transmitter Only option.\*

\*Includes Tx battery pack and charger

### Choose from:

#### Eight different receivers



R122JE • R152JE • R143F • R153F  
R113iP • R203HF • R303FHS • R603FS

#### Five different modules



PKAM 27 & 75 AM • PK-FSM27 Synthesized  
RFPK 27 & 75 FM • PK-FSM75 Synthesized  
RK-FSM2.4GHz

#### Seventeen different servos



BLS351 • BLS451 • S9350 • S5050 • S5302  
S9351 • S3010 • S5301 • S9452 • S3305  
S9402 • S9550 • S3302 • S9602 • S9650  
S3104 • S9405

### Servo Recommendations by application for HRS (High-Response)

Category	Steering	Throttle
1/8 On-road	BLS351/S9350/S9351	BLS451/S9350/S9351
1/8 Off-road	BLS351/S9350/S9351	BLS451/S9350/S9351
1/10 Nitro	BLS351/S9452	BLS451/S9350/S9351
1/10 Electric	BLS351/S9452	ESC
1/12 Electric	S9650	ESC
1/4 & 1/5 Gas	BLS351/S5050	BLS451/S9350/S9351

### Bring out the very best in 3PK performance with 2.4GHz spread spectrum technology!



See pages 24-25 for the 2.4GHz module and receiver that will produce an unbeatable combination of speed, precision and convenience for your 3PK system!

## 3VCS WITH 2.4GHz FASST SYSTEM

### The 2-stick alternative for superior surface control.

If you're an R/C pilot who wants to drive cars, trucks and boats — but are apprehensive about switching to a pistol grip radio — this is the system for you. The 3VCS offers virtually everything the 3PK "wheel" system does, including the same sophisticated programming, in a familiar 2-stick layout. What's more, you'll enjoy the response, accuracy and convenience of Futaba's 2.4GHz FASST technology.

### 3VCS 2.4GHz Specifics:

- HRS capability
- "New Driver", "Race-Ready" and "Expert" menus
- Adjuster feature that restores settings to factory default
- Stick position angle adjustment (+5° to -5°)
- "Direct Select" programming shortcuts
- Traction control
- 2 "free" programmable mixes
- Sub-trim, servo reversing and EPA on all channels
- Digital trims
- Throttle start/acceleration
- Brake mixing (front/rear independent) with delay



Stock #	System	Modulation	Band	Receiver
FUTK3000	3VCS FASST	FASST	2.4GHz	R603FS

# 3PM

## 3-CHANNEL COMPUTER SYSTEMS

### Everything that makes the 3PM such a great surface system - PLUS all of the advantages of spread spectrum technology!

Put the computer control of the 3PM in your hands, and be the master of your monster! Push-button programming and multi-model memory enable you to take quick set-up and instant recall for granted. A vast array of performance features and six programmable switches make it possible to fine-tune vehicle performance and control to any track condition or driving style. The 3PM-FS Pro adds extra features such as Digital Synthesizing, Auto-Detection and Fail Safe, while the 2.4GHz FASST version takes 3-channel control speed, precision and convenience to the limit! Experience off-roading as you never have before — with the 3PM.

### 3PM System Overview

- FM/PPM/HRS modes (27, 75MHz systems only)
- Condition selection for on-the-fly changes to steering rates
- 10-model memory
- Anti-lock Braking System (ABS) w/ adjustable return, pulse rate and delay settings
- Brake mixing for larger models
- One programmable mix
- Steering and throttle exponential
- Servo reversing on all channels
- Programmable throttle ATL (Adjustable Throttle-Low side only)
- Switch/function reassignment
- Adjustable servo speed (steering)
- Dual rates (steering)
- Up/down timer w/lap memory
- Low battery alarm
- Charge jack (for optional NiCd's)
- LCD screen w/adjustable contrast
- Wheel tension adjustment
- Includes set-up instructions for Traxxas® T-Maxx™ and HPI Racing® Savage™ trucks



#### R603FF

Revolutionary FASST technology is built in, and ready to deliver winning performance



#### R303FHS

When used with digital servos, HRS (High Response Speed) mode offers response that's three times faster than FM

Stock#	System	Modulation	Band	Servos	Receiver
FUTK2020	3PM FASST	FASST	2.4GHz	—	R603FF
FUTK15**	3PM	FM	27,75MHz	—	R133F
FUTK16**	3PM	FM	75MHz	(1)S3305	R133F
FUTK17**	3PM	FM	27,75MHz	(2)S3003	R133F
FUTK2121	3PM-FS Pro	FM/HRS	75MHz	—	R303FHS



# 2PL

## 2-Channel Computer Systems

### Available in AM and FM versions!

One-button programming, digital precision, 10-model memory – all these features help the 2PL leave all other 2-channel systems in the dust...and they're just the beginning! Other extras include a conveniently placed dual rate steering lever and simply designed menus that guide you through your set-up preferences. Use it for backyard bashing in the evening, push a button and you're set up for club races the next morning!

### 2PL System Overview

- 1-button programming
- 10-model memory
- 3-character model naming
- Easy-to-read LCD display
- Digital trims
- Dual rates (steering)
- End point adjustments for steering and throttle
- Anti-lock braking system (ABS)
- Servo reversing
- Low-battery alarm
- NiCd charging jack (NiCds optional)

### 2PL Specifics

- Displays battery voltage on opening screen and a low battery alarm when transmitter voltage drops below 8.5V
- Allows trim adjustments anytime, shows direction and distance from center and confirms center and setting changes with sound cues
- Offers slow, medium and fast pulse rates for ABS Braking, plus on/off option
- Includes EPA (End Point Adjustment) for limiting throttle travel, with separate settings for either side of neutral
- Steering dual rate switch is located on the grip, for easy adjustments anytime



One push brings up the opening screen; additional pushes steer you through the menu to the function you want. Just set values with the digital trims and you're ready to roll!



# 2PH

## 2-Channel Systems

### Affordable and great for backyard bashing!

Weekend racers looking for a radio that doesn't sacrifice quality for value need to look no further than the 2PH. Built to last, it's perfect for any racer on a fixed budget.

Stock #	System	Modulation	Bands	Servos	Receiver	ESC
FUTK01**	2PL	AM	75MHz	(1) S3003	R152JE	—
FUTK02**	2PL	AM	27,75MHz	(2) S3003	R152JE	—
FUTK03**	2PL	AM	75MHz	(1) S3003	R142JE	MC230CR
FUTK08**	2PL	FM	75MHz	—	R153F	—
FUTK09**	2PL	FM	27,75MHz	(2) S3003	R153F	—
FUTK10**	2PL	FM	75MHz	(1) S3003	R153F	—
FUTJ12**	2PH	AM	75MHz	(1) S3003, (1) S3010	R152JE	—
FUTJ13**	2PH	AM	75MHz	(1) S3003	R152JE	—
FUTJ14**	2PH	AM	27,75MHz	(2) S3003	R152JE	—
FUTJ15**	2PH	AM	27,75MHz	(1) S3003	R152JE	MC230CR

### 2PH System Overview

- Ergonomic design
- Tough composite case
- Wide, flat base for stability and balance
- Thick wheel post and high wheel collar for a solid feel and serious damage protection
- Dial trims – steering and throttle
- Servo reversing
- Battery status LEDs
- Protective smoked panel over servo reversing switches and LEDs



# DIGITAL SERVOS

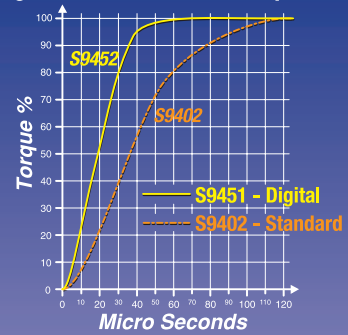
## Split-Second Precision, Power & Performance

The pulse rate on Futaba digital servos is six times faster than standard servos. That means that Futaba Digital servos have already responded to input five times before a standard servo responds even once. And what that means to performance is crystal clear.

It means that a Futaba digital servo can respond almost as fast as you can think. It means that deadband is virtually non-existent — and that Futaba digital servos can hold control surfaces longer and stronger, without fading or wavering, and snap back to center with surpassing ease and absolute precision.

Premium servos for premium performance — Futaba.

### Digital and Standard Servo Comparison



Both servos shown have the same specifications — but the digital servo supplies greater torque toward the center, with more holding power and more accurate positioning.

#### S3050 Standard High Torque



Volts	Torque	Speed
4.8V	72 oz-in	0.20 sec/60°
6.0V	90 oz-in	0.16 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	1.7 oz (49 g)	

FUTM0300

BB MG 3P

#### S3152 High Torque



Volts	Torque	Speed
4.8V	69 oz-in	0.22 sec/60°
6.0V	87 oz-in	0.18 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	1.4 oz (40 g)	

FUTM0311

BB 3P

#### S3155 High Speed Slim



Volts	Torque	Speed
4.8V	28 oz-in	0.16 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.2 x 0.4 x 1.1 in	0.7 oz (21 g)	

FUTM0655

BB MG

#### S9151 Rudder



Volts	Torque	Speed
4.8V	132 oz-in	0.19 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.8 oz (50 g)	

FUTM0211

BB WP CM

#### S9154 High Speed Aileron Low Profile



Volts	Torque	Speed
4.8V	64 oz-in	0.14 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.9 x 1.1 x 1.0 in	1.9 oz (53 g)	

FUTM0214

BB WP CM

#### S9250 Heli



Volts	Torque	Speed
4.8V	76 oz-in	0.11 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	1.9 oz (53 g)	

FUTM0220

BB MG WP CM

#### S9254 Heli High Torque/High Speed



Volts	Torque	Speed
4.8V	47 oz-in	0.06 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.7 oz (49 g)	

FUTM0224

BB WP CM

#### S3150 Slim Wing



Volts	Torque	Speed
4.8V	52 oz-in	0.24 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.2 x 0.4 x 1.1 in	0.8 oz (23 g)	

FUTM0303

BB MG 3P

#### S3153 Micro Mini



Volts	Torque	Speed
4.8V	19 oz-in	0.11 sec/60°
6.0V	24 oz-in	0.10 sec/60°
Dimensions	Weight	
0.9 x 0.4 x 0.8 in	0.32 oz (9.6 g)	

FUTM0653

#### S5050 High Torque 1/4 Scale



Volts	Torque	Speed
4.8V	211 oz-in	0.25 sec/60°
6.0V	264 oz-in	0.20 sec/60°
Dimensions	Weight	
2.4 x 1.2 x 2.0 in	4.5 oz (127 g)	

FUTM0255

BB MG WP CM

#### S9152 Mega High Torque



Volts	Torque	Speed
4.8V	222 oz-in	0.23 sec/60°
6.0V	278 oz-in	0.19 sec/60°
Dimensions	Weight	
1.9 x 1.0 x 1.6 in	3.0 oz (85 g)	

FUTM0212

BB MG WP CM

#### S9155 Air High Torque



Volts	Torque	Speed
4.8V	153 oz-in	0.16 sec/60°
6.0V	192 oz-in	0.13 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	2.1 oz (60 g)	

FUTM0215

BB MG WP

#### S9251 for GY601/GY611 Gyro Only



Volts	Torque	Speed
4.8V	51 oz-in	0.07 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	2.0 oz (57 g)	

FUTM0221

BB MG WP CM MCC

#### S9255 Heli High Torque



Volts	Torque	Speed
4.8V	125 oz-in	0.16 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.9 oz (56 g)	

FUTM0225

BB MG CM

#### S3151 Sport



Volts	Torque	Speed
4.8V	43 oz-in	0.21 sec/60°
6.0V	54 oz-in	0.17 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.5 oz (42 g)	

FUTM0310

BB 3P

#### S3154 High Torque/High Speed Micro



Volts	Torque	Speed
4.8V	21 oz-in	0.10 sec/60°
6.0V	24 oz-in	0.09 sec/60°
Dimensions	Weight	
0.9 x 0.4 x 0.8 in	0.3 oz (7.9 g)	

FUTM0654

#### S9150 Low-Profile Aileron



Volts	Torque	Speed
4.8V	81 oz-in	0.18 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.9 x 1.1 x 1.0 in	1.9 oz (53 g)	

FUTM0210

BB WP CM

#### S9153 High Speed/High Torque



Volts	Torque	Speed
4.8V	167 oz-in	0.19 sec/60°
6.0V	208 oz-in	0.15 sec/60°
Dimensions	Weight	
1.9 x 1.0 x 1.6 in	3.0 oz (85 g)	

FUTM0213

BB MG WP CM

#### S9156 Air High Torque



Volts	Torque	Speed
4.8V	272 oz-in	0.21 sec/60°
6.0V	340 oz-in	0.17 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	2.2 oz (62 g)	

FUTM0216

BB MG MC

Outstanding for IMAC!

#### S9252 All-Purpose



Volts	Torque	Speed
4.8V	92 oz-in	0.14 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.8 oz (50 g)	

FUTM0222

BB MG WP CM

#### S9256 Heli High Speed for GY601/GY611 Gyro



Volts	Torque	Speed
4.8V	47 oz-in	0.06 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	2.0 oz (57 g)	

FUTM0226

BB MG WP CM MCC



**S9257 High Torque Heli Rudder**

Volts	Torque	Speed
4.8V	28 oz-in	0.08 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.4 x 0.6 x 1.1 in	0.9 oz (28 g)	

FUTM0235

BB

**S9350 High Torque**

Volts	Torque	Speed
4.8V	111 oz-in	0.15 sec/60°
6.0V	139 oz-in	0.12 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	2.1 oz (61 g)	

FUTM0235

BB MG WP CM MCC

**S9351 High Torque**

Volts	Torque	Speed
4.8V	153 oz-in	0.16 sec/60°
6.0V	192 oz-in	0.13 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	2.1 oz (61 g)	

FUTM0236

BB MG WP CM MCC

**S9452 High Torque/High Speed**

Volts	Torque	Speed
4.8V	n/a	n/a
6.0V	128 oz-in	0.11 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.3 in	1.8 oz (50 g)	

FUTM0662

BB MG CM

**S9551 High Torque/Low Profile**

Volts	Torque	Speed
4.8V	92 oz-in	0.14 sec/60°
6.0V	136 oz-in	0.12 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.0 in	1.6 oz (45 g)	

FUTM0661

BB MG CM WP

**S9650 Mini**

Volts	Torque	Speed
4.8V	50 oz-in	0.14 sec/60°
6.0V	63 oz-in	0.11 sec/60°
Dimensions	Weight	
1.4 x 0.6 x 1.1 in	1.1 oz (31 g)	

FUTM0260

BB CM

**Note:** For servo application chart, see page 21.

# BRUSHLESS DIGITAL SERVOS

## Another Futaba first - for longer servo life and better performance.

In the race for innovations that get big results, Futaba always comes first — whether bringing exceptionally precise Silicon Micro Machining (SMM) technology to gyros, developing incredibly accurate 2048 resolution, or getting maximum speed, reliability and security out of 2.4GHz radio systems. Now Futaba has done it again — by unveiling the first digital servos with the advantages of brushless technology.

- At least five times longer-lasting than brushed servos.
- 30% faster response times.
- Greater resistance to jolts and vibration.
- Smoother operation.

### Plus. . .

- Same power consumption as brushed digital servos.
- Same compact case size as standard servos.
- Exceptionally durable geartrain.
- Smooth dual ball bearings and strong Samarium Cobalt magnets.



	STANDARD		
	BLS251	BLS351	BLS451
<b>Car</b>			
Nitro Car		●	●
EP Car		●	●
<b>Boat</b>			
EP, Nitro Boat		●	●
Yacht		●	●
<b>Airplane</b>			
Glider		●	●
EP Plane		●	●
Small Plane		●	●
Nitro Plane		●	●
<b>Helicopter</b>			
EP Helicopter	■	●	●
Helicopter	■	●	●
<b>Features</b>			
Ball Bearings	2	2	2
Metal Gear	★	★	★
Water Protected		◆	◆
Metal Center Case	✕	✕	

**BLS251 High-Speed Heli Rudder**

Volts	Torque	Speed
4.8V	53 oz-in	0.06 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	2.1 oz (61 g)	

FUTM0550

2BB MG WP MCC

**BLS351 High-Torque**

Volts	Torque	Speed
4.8V	168 oz-in	0.16 sec/60°
6.0V	208 oz-in	0.12 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	2.2 oz (62 g)	

FUTM0551

2BB MG WP MCC

**BLS451 High-Torque High-Speed**

Volts	Torque	Speed
4.8V	118 oz-in	0.13 sec/60°
6.0V	147 oz-in	0.10 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	2 oz (58 g)	

FUTM0552

2BB MG WP

**Barry Baker TQs and wins the 2007  
On-Road Nats using the Futaba  
BLS451 — in its first major race!**

■ = Recommended ● = Compatible CM = Coreless Motor 3P = 3-pole Motor 5P = 5-pole Motor BB = Ball Bearing MG = Metal Gear WP = Water Protected MCC = Metal Center Case

[www.futaba-rc.com](http://www.futaba-rc.com)

# ANALOG SERVOS

## Power and speed for every R/C application

For any type of radio-controlled model, Futaba has the ideal servo. And that holds true whether the application requires a special size, specific torque, better mesh, smoother operation or faster speed. Whatever the function, there's a Futaba servo to meet it — housed in an impact- and fuel-resistant case to protect your investment.



### S136G Compact Retract

Volts	Torque	Speed
4.8V	61 oz-in	0.60 sec/60°
6.0V	76 oz-in	0.50 sec/60°
Dimensions	Weight	
1.8 x 0.9 x 1.0 in	1.5 oz (42 g)	

FUTM0670 BB WP 3P



### S148 Precision

Volts	Torque	Speed
4.8V	33 oz-in	0.28 sec/60°
6.0V	42 oz-in	0.22 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.5 oz (42 g)	

FUTM0710 3P



### S3001 Precision

Volts	Torque	Speed
4.8V	33 oz-in	0.28 sec/60°
6.0V	42 oz-in	0.22 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.6 oz (45 g)	

FUTM0029 BB 3P



### S3002 Mini

Volts	Torque	Speed
4.8V	36 oz-in	0.25 sec/60°
6.0V	46 oz-in	0.20 sec/60°
Dimensions	Weight	
1.2 x 0.6 x 1.2 in	1.2 oz (35 g)	

FUTM0030 2BB MG 3P



### S3003 Standard

Volts	Torque	Speed
4.8V	44 oz-in	0.23 sec/60°
6.0V	57 oz-in	0.19 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.3 oz (37 g)	

FUTM0031 3P



### S3004 Standard

Volts	Torque	Speed
4.8V	44 oz-in	0.23 sec/60°
6.0V	57 oz-in	0.19 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.4 in	1.3 oz (37 g)	

FUTM0004 BB 3P



### S3010 High Torque

Volts	Torque	Speed
4.8V	72 oz-in	0.20 sec/60°
6.0V	90 oz-in	0.16 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	1.4 oz (41 g)	

FUTM0043 BB 3P



### S3102 Aircraft Micro

Volts	Torque	Speed
4.8V	51 oz-in	0.25 sec/60°
6.0V	64 oz-in	0.20 sec/60°
Dimensions	Weight	
1.1 x 0.5 x 1.2 in	0.7 oz (21 g)	

FUTM0034 MG 3P



### S3104 1/4 Scale

Volts	Torque	Speed
4.8V	128 oz-in	0.21 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
2.3 x 1.1 x 2.0 in	3.3 oz (93.5 g)	

FUTM0036 BB WP 3P



### S3107 Micro

Volts	Torque	Speed
4.8V	16.7 oz-in	0.12 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
0.9 x 0.4 x 0.8 in	0.3 oz (9 g)	

FUTM0025 3P



### S3111 Micro

Volts	Torque	Speed
4.8V	8.3 oz-in	0.12 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
0.9 x 0.4 x 0.8 in	0.23 oz (6.6 g)	

FUTM0047 3P



### S3111M Micro w/Micro Plug

Volts	Torque	Speed
4.8V	8.3 oz-in	0.12 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
0.9 x 0.4 x 0.8 in	0.22 oz (6.6 g)	

FUTM0703 3P



### S3113 Micro Mini

Volts	Torque	Speed
4.8V	19 oz-in	0.11 sec/60°
6.0V	23 oz-in	0.09 sec/60°
Dimensions	Weight	
0.8 x 0.4 x 0.7 in	0.3 oz (9 g)	

FUTM0413 3P



### S3114 Micro High Torque

Volts	Torque	Speed
4.8V	20.8 oz-in	0.10 sec/60°
6.0V	23.5 oz-in	0.09 sec/60°
Dimensions	Weight	
0.9 x 0.4 x 0.8 in	0.27 oz (7.8 g)	

FUTM0414 3P



### S3114 Micro High Torque w/Micro Plug

Volts	Torque	Speed
4.8V	19 oz-in	0.11 sec/60°
6.0V	23 oz-in	0.09 sec/60°
Dimensions	Weight	
0.9 x 0.4 x 0.8 in	0.3 oz (7.8 g)	

FUTM0704 3P



### S3115 Micro Precision

Volts	Torque	Speed
4.8V	39 oz-in	0.15 sec/60°
6.0V	n/a	n/a
Dimensions	Weight	
1.1 x 0.5 x 1.1 in	0.6 oz (17 g)	

FUTM0415 3P



### S3302 1/4 Scale

Volts	Torque	Speed
4.8V	89 oz-in	0.24 sec/60°
6.0V	111 oz-in	0.19 sec/60°
Dimensions	Weight	
2.3 x 1.1 x 2.0 in	3.6 oz (103 g)	

FUTM0035 2BB MG WP 3P



### S3305 Standard High Torque

Volts	Torque	Speed
4.8V	99 oz-in	0.25 sec/60°
6.0V	124 oz-in	0.20 sec/60°
Dimensions	Weight	
1.6 x 0.8 x 1.5 in	1.6 oz (47 g)	

FUTM0045 2BB MG 3P



### S3306 High Torque 1/5 Scale

Volts	Torque	Speed
4.8V	266.5 oz-in	0.20 sec/60°
6.0V	333 oz-in	0.16 sec/60°
Dimensions	Weight	
2.6 x 1.2 x 2.0 in	4.5 oz (127 g)	

FUTM0020 2BB



### S3801 High Torque Sail

Volts	Torque	Speed
4.8V	155 oz-in	0.32 sec/60°
6.0V	194 oz-in	0.26 sec/60°
Dimensions	Weight	
2.3 x 1.1 x 2.0 in	3.7 oz (105 g)	

FUTM0038 2BB MG WP 3P



### S3802 Standard Sail

Volts	Torque	Speed
4.8V	122 oz-in	0.70 sec/60°
6.0V	153 oz-in	0.56 sec/60°
Dimensions	Weight	
1.8 x 1.0 x 1.7 in	2.5 oz (71 g)	

FUTM0039 2BB MG WP 3P





■ = Recommended    ● = Compatible    CM = Coreless Motor    3P = 3-pole Motor    5P = 5-pole Motor    BB = Ball Bearing    MG = Metal Gear    WP = Water Protected

# SERVO ACCESSORIES

## NYLON SERVO HORNS

Stock #	Part #	Style/Application
FUTM1835	FSH-6H	Horn H - S3801
FUTM1980	FSH-6E	Horn E - Long Arm S28/48
FUTM1985	FSH-6F	Horn F - Small X Spline
FUTM2000	FSH-6R	Horn C - Disc S28/48
FUTM2005	FSH-63	Horn - S3103/3107 (4)
FUTM2010	FSH-6S	Horn B - Star S28/48
FUTM2011	FSH-6T	Horn - T-Shape Car
FUTM2020	FSH-6W	Horn D - Wheel S28/48
FUTM2030	FSH-6X	Horn A - X S28/48
FUTM2035	FSH-6G	Horn G - Disc S34/134/134G
FUTM2036	FSH-7W	Horn W - Wheel Large (4)
FUTM2038	1M11K12801	Mini Servo Horn A
FUTM2042	FSH-9152	Servo Horns S9152/9153
FUTM2045	FSH-5801	Horn - Sail Winch Drum S5801
FUTM2258	FSH-38	Sail Servo Arm - S3801/125
FUTM2350	FSH-3103	Accessory Package S3103/3107
FUTM2360	FSH-9150	Accessory Pack S9150
FUTM3550	FSH-42	Accy. Pkg. S28/30/32/48/9301
FUTM3551	FSH-50	Accessory Package S3003
FUTM4510	FSH-60	Sub Micro Horn Std S3108 (3)
FUTM4511	FSH-61	Sub Micro Horn Long S3108 (3)



## ALUMINUM SERVO HORNS

Stock #	Part #	Style/Application
FUTM2050	FSH-59	Adjustable Servo Horn
FUTM2100	FSH-TD3S	2" Double Horn - Silver
FUTM2105	FSH-TD2S	1.5" Double Horn - Silver
FUTM2110	FSH-TD1S	1" Double Horn - Silver
FUTM2115	FSH-T2S	1.5" Single Horn - Silver
FUTM2117	FSH-T2R	1.5" Single Horn - Red
FUTM2118	FSH-T2B	1.5" Single Horn - Blue
FUTM2120	FSH-T1S	1" Single Horn - Silver
FUTM2122	FSH-T1R	1" Single Horn - Red
FUTM2123	FSH-T1B	1" Single Horn - Blue
FUTM2125	FSH-TD4S	20 mm Double Thin Arm - Silver
FUTM2127	FSH-TD4R	20 mm Double Thin Arm - Red
FUTM2128	FSH-TD4B	20 mm Double Thin Arm - Blue
FUTM2130	FSH-T4S	20 mm Single Thin Arm - Silver
FUTM2132	FSH-T4R	20 mm Single Thin Arm - Red
FUTM2133	FSH-T4B	20 mm Single Thin Arm - Blue



## SERVO HORN GAUGES

FUTM2400	Horn Drill Gauge 12.5-15 mm
FUTM2401	Horn Drill Gauge 9.5-12 mm

## SERVO SCREWS

Stock #	Part #	Style/Application
FUTM2040	FSH-11	Horn Screws & Washers (10)
FUTM2250	FSH-32	Mounting Screws & Washers (10)
FUTM2260	FSH-41	Horn Screw - 28/29/30/31/32 (10)
FUTM2265	FSH-49	Horn Screw for Metal Gear (10)
FUTM2270	FSH-44	Horn Screw S33 (10)
FUTM2275	FSH-55	Horn Screw S3103 (10)
FUTM2280	FSH-51	Self Tap Screw M2.6X10 (10)
FUTM2285	FSH-52	Horn Screw M2X6 S125 (10)
FUTM2290	FSH-53	Self Tap Screw M3X8 S9150 (10)
FUTM2291	FSH-62	Horn Screw 3x6 (10)
FUTM2295	FSH-57	Horn Screw S9550 (10)

## SERVO GROMMETS

FUTM2310	FSH-10	Grommets Round (20)
FUTM2320	FSH-20	Grommets Square (20)
FUTM2340	FSH-40	Grommets Rectangular (20)
FUTM2345	FSH-54	Grommets S9150 (10)
FUTM2346	FSH-46	Grommets S134/3302 (20)
FUTM2347	FSH-47	Eyelets S134/3302 (20)
FUTM2348	FSH-48	Grommets Split (20)
FUTM3650	FSH-21	Eyelets - Brass (20)

## SERVO TRAYS

Stock #	Part #	Style/Application
FUTM2670	FST28T	Standard Tray 2+ S48/148/3003
FUTM2680	FST28V	Single Vertical Tray S148/3003



## CASE SETS

## GEAR SETS

## HORN SCREW

Servo	Case Set	Stock #	Gear Set	Stock #	Hardware	Stock #
BLS251	UBS-251	n/a	FGS-9251	FUTM3443	n/a	n/a
BLS351	n/a	n/a	n/a	n/a	n/a	n/a
BLS451	FCSH-51	n/a	FGS-451	n/a	n/a	n/a
S36G/136G	FCS-36G	FUTM2990	FGS-36G	FUTM3397	FSH-51	FUTM2280
S48/148	UBS-48	FUTM2999	FGS-48	FUTM3400	FSH-41	FUTM2260
S3001	UBS-3001	FUTM2946	FGS-48	FUTM3400	FSH-41	FUTM2260
S3002	FCS-3002	FUTM2935	FGS-3002	FUTM3415	FSH-49	FUTM2265
S3003	UBS-3003	FUTM2939	FGS-3003	FUTM3416	FSH-41	FUTM2260
S3004	UBS-3004	FUTM2942	FGS-3003	FUTM3416	FSH-41	FUTM2260
S3010	FCS-3010	FUTM2948	FGS-3010	FUTM3328	FSH-41	FUTM2260
S3050	FCS-3010	FUTM2948	FGS-3050	FUTM3450	FSH-57	FUTM2295
S3102	FCS-3101	FUTM3050	FGS-3102	FUTM3435	FSH-49	FUTM2265
S3104	FCS-34	FUTM2980	FGS-3104	FUTM3352	FSH-41	FUTM2260
S3107	n/a	n/a	FGS-3107	FUTM3358	FSH-55	FUTM2275
S3111/M	FCS-3110	FUTM2952	FGS-3111	FUTM3466	FSH-60	FUTM4510
S3113	FCS-3113	n/a	FGS-3113	n/a	n/a	n/a
S3114/M	FCS-3114	FUTM3001	FGS-3114	FUTM3467	n/a	n/a
S3115	FCS-3115	n/a	FGS-3103	FUTM3404	n/a	n/a
S3150	FCS-3150	FUTM3073	FGS-3150	FUTM3451	FSH-62	FUTM2291
S3151	UBS-3001	FUTM2946	FGS-48	FUTM3400	FSH-41	FUTM2260
S3152	FCS-3010	FUTM2948	FGS-3010	FUTM3328	FSH-41	FUTM2250
S3153	FCS-3153	FUTM3074	FGS-3153	FUTM3329	n/a	n/a
S3154	FCS-3114	FUTM3001	FGS-3154	FUTM3467	n/a	n/a
S3155	FCS-3150	FUTM3073	FGS-3155	FUTM3331	n/a	n/a
S3302	FCS-34	FUTM2980	FGS-3302	FUTM3410	FSH-49	FUTM2265
S3305	FCS-3010	FUTM2948	FGS-3305	FUTM3384	FSH-57	FUTM2295
S3306	FCS-3306	FUTM3002	FGS-3306	FUTM3412	n/a	n/a
S3801	FCS-34	FUTM2980	FGS-3303	FUTM3411	FSH-49	FUTM2265
S3802	FCS-3802	FUTM2976	FGS-3802	FUTM3398	FSH-49	FUTM2265
S5050	FCS-34	FUTM2980	FGS-5050	FUTM3449	FSH-57	FUTM2295
S5301	FCS-34	FUTM2980	FGS-5301	FUTM3446	FSH-49	FUTM2265
S5302	FCS-34	FUTM2980	FGS-5302	FUTM3448	FSH-49	FUTM2265
S5801	FCS-5801	FUTM3010	FGS-5801	FUTM3403	FSH-49	FUTM2265
S9001	FCS-9001	FUTM3055	FGS-48	FUTM3400	FSH-41	FUTM2260
S9102	FCS-9102	FUTM3000	FGS-9102	FUTM3407	FSH-51	FUTM2280
S9150	FCS-9150	FUTM3066	FGS-9150	FUTM3441	FSH-53	FUTM2290
S9151	FCS-9151	FUTM3057	FGS-9151	FUTM3442	FSH-41	FUTM2260
S9152	FCS-9152	FUTM3071	FGS-9152	FUTM3452	n/a	n/a
S9153	FCS-9152	FUTM3071	FGS-9153	FUTM3453	n/a	n/a
S9154	FCS-9150	FUTM3066	FGS-9154	FUTM3454	FSH-53	FUTM2290
S9155	FCS-9351	FUTM3025	FGS-9351	FUTM3460	FSH-53	FUTM2290
S9156	FCS-9156	FUTM3059	FGS-9156	FUTM3456	n/a	n/a
S9202	FCS-9202	FUTM3020	FGS-31S	FUTM3340	FSH-51	FUTM2280
S9206	FCS-9203	FUTM3067	FGS-9206	FUTM3447	FSH-49	FUTM2265
S9250	FCS-9203	FUTM3067	FGS-9203	FUTM3433	FSH-49	FUTM2265
S9251	FCS-9251	FUTM3068	FGS-9251	FUTM3443	FSH-49	FUTM2265
S9252	FCS-9151	FUTM3057	FGS-9252	FUTM3444	FSH-41	FUTM2260
S9254	FCS-9151	FUTM3057	FGS-9253	FUTM3445	FSH-41	FUTM2260
S9255	FCS-9255	FUTM3030	FGS-9255	FUTM3463	FSH-49	FUTM2265
S9256	FCS-9256	FUTM3064	FGS-9251	FUTM3443	FSH-49	FUTM2265
S9257	FCS-9257	FUTM3063	FGS-9257	FUTM3464	n/a	n/a
S9350	FCS-9350	FUTM3005	FGS-9350	FUTM3434	FSH-57	FUTM2295
S9351	FCS-9351	FUTM3025	FGS-9351	FUTM3460	FSH-57	FUTM2295
S9402	FCS-9203	FUTM3067	FGS-9402	FUTM3430	FSH-49	FUTM2265
S9405	FCS-9203	FUTM3067	FGS-9402	FUTM3430	FSH-49	FUTM2265
S9452	FCS-9451	FUTM3069	FGS-9451	FUTM3432	n/a	n/a
S9550	FCS-9550	FUTM3015	FGS-9550	FUTM3439	FSH-57	FUTM2295
S9602	FCS-9602	FUTM3065	FGS-9602	FUTM3437	FSH-49	FUTM2265
S9650	FCS-9650	FUTM3431	FGS-9650	FUTM3080	FSH-41	FUTM2260

## SERVO CONNECTORS

Stock #	Part #	Style/Application	Length
FUTM3720	FPC8J	J-Type Female Connector	12 in
FUTM3730	FPC8M	J-Type Servo Male Connector	12 in
FUTM3740	FPC8MF	J-Type Servo/NiCd Male Connectors	12 in
FUTM3810	FPC3MF	G-Type Male/Female Servo Connectors	6 in
FUTM3820	FPC8F	J-Type NiCd Male Connector	3 in



FPC8J  
J-Type



FPC8M  
J-Type



FPC8MF  
J-Type



FPC3MF  
G-Type



FPC8F  
J-Type



# WIRE ACCESSORIES

## DSC Cords

With a Direct Servo Control (DSC) cord, you can test servo response without sending a signal — great for last-minute adjustments in the pits.

Stock #	Part #	Description
FUTM4243	NCC9	On Board DSC/Charge Adapter
FUTM4244	NCC12	DSC Cord 9C/CS/12Z/FG/14MZ
FUTM4245	NCC10	DSC Cord 3PB/3PK
FUTM4250	NCC11	DSC Cord 3UC/9Z



NCC10  
FUTM4245

## Extensions

Ready-made answers to too-short wiring — G and J plug versions ensure connector compatibility.



FUTM3900

Stock #	Part #	Description	Length
FUTM3900	AEC1	Servo Extension G-Type	9 in
FUTM3909	AEC27	Servo Extension J-Type	3 in
FUTM3910	AEC3	Servo Extension J-Type	6 in
FUTM3955	AEC11	Servo Extension J-Type	16 in
FUTM4110	AEC9	Servo Adapter J-Type to G-Type	6 in
FUTM4120	AEC10	Servo Adapter G-Type to J-Type	6 in
FUTM4125	AEC12	Servo Extension J-Type	39 in
FUTM4130	AEC13	Dual Servo Extension J-Type	6 in
FUTM4149	AEC19	Servo Extension w/Filter J-Type	8 in
FUTM4504	AEC29	Micro Plug Y-Harness	3 in
FUTM4506	AEC25	Servo Extension Std Plug	6 in
FUTM4507	AEC26	Servo Extension Std Plug	12 in
FUTM4508	AEC23	Servo Extension Micro Plug	8 in
FUTM4509	AEC28	Servo Extension Micro Plug	3 in



J-Type



G-Type



Micro

## Heavy Duty Extensions

Heavier, 20-gauge wire handles higher current loads with ease.

Stock #	Part #	Description	Length
FUTM4135	AEC16	Heavy-Duty Dual Servo Extension J-Type	6 in
FUTM4140	AEC14	Heavy-Duty Servo Extension J-Type	8 in
FUTM4145	AEC15	Heavy-Duty Servo Extension J-Type	16 in
FUTM4147	AEC17	Heavy-Duty Servo Extension J-Type	20 in
FUTM4148	AEC18	Heavy Duty Servo Extension J-Type	40 in
FUTM4180	AEC20	HD Servo Extension w/Filter J-Type	8.6 in



FUTM4147

## Switch Harnesses

All include receiver on/off switch factory pre-wired to leads and connectors.



FUTM4350



FUTM4360

FUTM4370



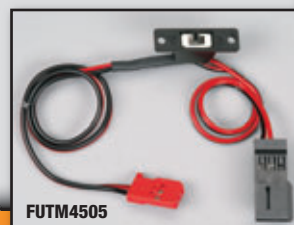
FUTM4382



FUTM4385



Stock #	Part #	Description
FUTM4350	SWH7	Mini J FM
FUTM4360	SWH8	Mini G w/Charge Cord
FUTM4370	SWH13	Mini J w/Charge Cord
FUTM4382	SWH12	Mini J w/BEC Connector
FUTM4385	SWH14	Heavy-Duty J w/Charge Cord
FUTM4505	SWH15	Ultra Mini J
FUTM4387	SWH16	Switch Harness 14MZ



FUTM4505

## Charge Cords

Stock #	Part #	Description	Length
FUTM4221	NCC13	Tx Charge Cord	60 in
FUTM4231	NCC14	Rx Charge Cord	60 in
FUTM4235	NCC16	CR2500 Charge Cord 14MZ	30 in
FUTM4236	NCC17	CR2000 Charge Cord 12FG	—



# FASST RECEIVERS & TRANSMITTER MODULES

## Retrofit your current Futaba systems for FASST results!

In addition to complete 2.4GHz systems, Futaba offers separate 2.4GHz FASST modules, receivers, and module/receiver sets for upgrading earlier Futaba radios.

These components let you take advantage of the benefits available from spread spectrum technology — described on pages 2 and 3 — without investing in a new transmitter. Just plug them into the Futaba radios you already own!



- Designed for a superior fit with Futaba equipment — no external wires or cables to get in your way or become disconnected
- Antenna is built into the module and pivots to maximize your RF link
- Include an easy fail-safe set-up and Futaba's push-button Easy Link™ receiver-to-transmitter binding
- All-in-one, state-of-the-art receivers — small, powerful R607FS for flight systems can control giant-scale models as easily as park flyers!

## 2.4GHz MODULE/RECEIVER SETS

### 3PK Set

- Auto-selects HRS or PPM modulation
- R603FS receiver includes Dual Antenna Diversity (DAD) for reliable signal reception

FUTL8926 3PK Module/Receiver Set



### 7-Channel Set

- Fits 7U, 8U, 9C and 9Z systems

FUTL8950 7-Channel Module/Receiver Set



### 8-Channel Set

- Works with 7U, 8U, 9C and 9Z systems

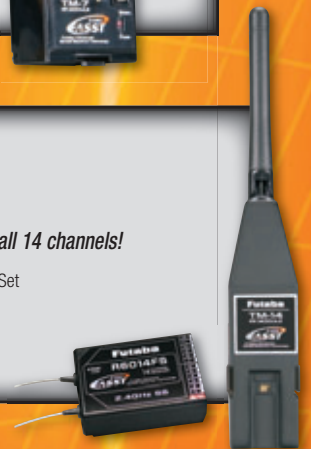
FUTL8952 8-Channel Module/Receiver Set



### 14-Channel Set

- Fits the 12FG, 12Z, and 14MZ
- Only Futaba allows for the use of all 14 channels!

FUTL8956 14-Channel Module/Receiver Set





# 2.4GHz MODULES

Simple, plug-in installation - no transmitter modification required.

For 7U, 8U, 9C  
and 9Z Systems:

TM-7 7-Channel FASST Module  
FUTL8927  
Recommended Receiver: R607FS



For 7U, 8U, 9C  
and 9Z Systems:

TM-8 8-Channel FASST Module  
FUTL8928  
Recommended Receiver: R608FS



For 12Z, 12FG and  
14MZ Systems:

TM-14 14-Channel FASST Module  
FUTL8934  
Recommended Receiver: R6014FS



# 2.4GHz RECEIVERS

## R603FF 3-Channel Receiver

Dimensions: 1.5 x 1 x 0.55 in (39 x 26 x 14 mm)  
Weight: 0.45 oz (13 g)  
FUTL7631



## R603FS 3-Channel Receiver

Dimensions: 1.5 x 1 x 0.55 in (39 x 26 x 14 mm)  
Weight: 0.5 oz (14g)  
FUTL7630



## R606FS 6-Channel Receiver

Dimensions: 1.6 x 1.1 x 0.35 in (40 x 27 x 9 mm)  
Weight w/Case: 0.35 oz (10 g)  
Weight w/o Case: 0.25 oz (7 g)  
FUTL7635



## R607FS 7-Channel Receiver

Dimensions: 1.6 x 1.1 x 0.35 in (40 x 27 x 9 mm)  
Weight w/ Case: 0.35 oz (10 g)  
Weight w/o Case: 0.25 oz (7 g)  
FUTL7637



## R608FS 8-Channel Receiver

Dimensions: 1.8 x 0.9 x 0.5 in (45 x 22 x 14 mm)  
Weight: N/A  
FUTL7638



## R6014FS 14-Channel Receiver

Dimension: 1.5 x 2.0 x 0.6 in (38 x 52 x 16 mm)  
Weight: 1.13 oz (32 g)  
FUTL7644



TRANSMITTER	MODULES		
	TM-7	TM-8	TM-14
7U	X	X	
8U	X	X	
9C	X	X	
9Z	X	X	
12FG			X
12Z			X
14MZ			X

TRANSMITTER	RECEIVERS					
	R603FF	R603FS	R606FS	R607FS	R608FS	R6014FS
3PM 2.4GHz	X	X				
3PK 2.4GHz	X	X				
3VCS 2.4GHz	X	X				
6EX 2.4GHz			X	X		
7C 2.4GHz			X	X		
7U 2.4GHz				X	X	X
8U 2.4GHz				X	X	X
9C 2.4GHz				X	X	X
9Z 2.4GHz				X	X	X
12FG 2.4GHz			X	X	X	X
12Z 2.4GHz			X	X	X	X
14MZ 2.4GHz			X	X	X	X

# RECEIVERS & CRYSTALS

## Receivers

Futaba's up-to-the-minute materials and advanced manufacturing methods make Futaba receivers what they are today: ultra-lightweight, incredibly durable and utterly reliable

### R122JE — 2-Channel AM w/BEC

Band	Stock #	Xtal #
27MHz	FUTL0100	FUTL46**
72 MHz Low	FUTL0102	FUTL47**
72 MHz High	FUTL0103	FUTL48**
75 MHz	FUTL0104	FUTL49**
Dimensions	Weight	Antenna
1.9 x 1.3 x 0.7 in (48 x 33 x 18 mm)	0.66 oz (19 g)	39 in (990 mm)

### R152JE — 2-Channel AM

Band	Stock #	Xtal #
27 MHz	FUTL0205	FUTL49**
75 MHz	FUTL0206	FUTL49**
Dimensions	Weight	Antenna
1.5 x 1.0 x 0.6 in (38 x 26 x 15 mm)	0.5 oz (14 g)	n/a

### R113iP — 3-Channel PCM Micro

Band	Stock #	Xtal #
27 MHz	FUTL0300	FUTL51**
75 MHz	FUTL0304	FUTL52**
Dimensions	Weight	Antenna
1.7 x 1.1 x 0.4 in (43 x 28 x 10 mm)	0.7 oz (20 g)	19.6 in (498 mm)

### R203HF — 3-Channel FM Micro High-Response System (HRS)

Band	Stock #	Xtal #
27 MHz	FUTL0340	FUTL61**
75 MHz	FUTL0344	FUTL64**
Dimensions	Weight	Antenna
1.5 x 1.0 x 0.6 in (38 x 25 x 15 mm)	0.63 oz (18 g)	19.4 in (493 mm)

### R143F — 3-Channel FM w/Fail-Safe

Band	Stock #	Xtal #
27 MHz	FUTL0350	FUTL61**
75 MHz	FUTL0354	FUTL64**
Dimensions	Weight	Antenna
1.1 x 1.7 x 0.6 in (29 x 43 x 14 mm)	0.6 oz (17 g)	19.6 in (498 mm)

### R153F — 3-Channel FM Micro

Band	Stock #	Xtal #
27 MHz	FUTL0360	FUTL95**
75 MHz	FUTL0364	FUTL64**
Dimensions	Weight	Antenna
1.5 x 1.0 x 0.6 in (38 x 26 x 14 mm)	0.5 oz (14 g)	n/a

### R303FHS — 3-Channel Synthesized FM/PCM/HRS

Band	Stock #	Xtal #
27 MHz	FUTL7619	n/a
75 MHz	FUTL7620	n/a
Dimensions	Weight	Antenna
1.6 x 1.1 x 0.6 in (40 x 27 x 15 mm)	0.6 oz (17 g)	n/a

### R124F — 4-Channel FM Ultra Micro

Band	Stock #	Xtal #
72 MHz Low	FUTL0438	FUTL62**
72 MHz High	FUTL0439	FUTL63**
Dimensions	Weight	Antenna
0.6 x 1.3 x 0.64 in (15 x 33 x 16 mm)	0.3 oz (8.5 g)	n/a

### R114F — 4-Channel FM Micro

Band	Stock #	Xtal #
72 MHz Low	FUTL0442	FUTL62**
72 MHz High	FUTL0443	FUTL63**
Dimensions	Weight	Antenna
1.3 x 0.8 x 0.5 in (33 x 20 x 13 mm)	0.36 oz (10 g)	27.4 in (696 mm)

### R124H — 4-Channel AM

Band	Stock #	Xtal #
27 MHz	FUTL0450	FUTL61**
72 MHz	FUTL0451	FUTL48**
75 MHz	FUTL0454	FUTL49**
Dimensions	Weight	Antenna
1.48 x 1.0 x 0.6 in (38 x 26 x 15 mm)	0.5 oz (14 g)	19 in (483 mm)

### R146iP — 6-Channel PCM Micro

Band	Stock #	Xtal #
72 MHz	FUTL0601	FUTL62** FUTL63**
Dimensions	Weight	Antenna
1.7 x 1.1 x 0.5 in (42 x 28 x 13 mm)	0.5 oz (14 g)	27 in (686 mm)

### R156F — 6-Channel FM Micro

Band	Stock #	Xtal #
72 MHz	FUTL0641	FUTL62** FUTL63**
Dimensions	Weight	Antenna
1.33 x 0.8 x 0.5 in (34 x 20 x 13 mm)	0.35 oz (10 g)	27 in (686 mm)

### R148DF — 8-Channel FM Micro

Band	Stock #	Xtal #
50 MHz	FUTL0811	FUTL56**
72 MHz Low	FUTL0812	FUTL57**
72 MHz High	FUTL0813	FUTL58**
Dimensions	Weight	Antenna
2.2 x 1.0 x 0.9 in (56 x 25 x 23 mm)	1.1 oz (31 g)	38.8 in (986 mm)

### R148DP — 8-Channel PCM Micro

Band	Stock #	Xtal #
50 MHz	FUTL0821	FUTL56**
72 MHz Low	FUTL0822	FUTL57**
72 MHz High	FUTL0823	FUTL58**
Dimensions	Weight	Antenna
2.2 x 1.0 x 0.9 in (56 x 25 x 23 mm)	1.1 oz (31 g)	38.8 in (986 mm)

### R168DP — 8-Channel PCM Micro

Band	Stock #	Xtal #
72 MHz	FUTL0806	FUTL57**
	FUTL0807	FUTL58**
Dimensions	Weight	Antenna
1.1 x 2.2 x 0.79 in (29 x 56 x 20 mm)	0.35 oz (24 g)	n/a

### R168DF — 8-Channel FM

Band	Stock #	Xtal #
27 MHz	FUTL0831	FUTL56**
72 MHz	FUTL0832	FUTL57** FUTL58**
75 MHz	FUTL0833	FUTL59**
Dimensions	Weight	Antenna
1.1 x 1.2 x 0.8 in (29 x 56 x 20 mm)	1.0 oz (28 g)	n/a

### R149DP — 9-Channel PCM

Band	Stock #	Xtal #
50 MHz	FUTL0901	FUTL56**
72 MHz	FUTL0911	FUTL57** FUTL58**
Dimensions	Weight	Antenna
2.2 x 1.3 x 0.8 in (56 x 33 x 20 mm)	1.2 oz (34 g)	38.8 in (986 mm)

### R319DPS — 9-Channel PCM Synthesized

Band	Stock #	Xtal #
72 MHz	FUTL7610	n/a
Dimensions	Weight	Antenna
1.3 x 2.1 x 0.8 in (33 x 53 x 20 mm)	1.3 oz (35 g)	43 in (1092 mm)

### R5114DPS — 14-Channel Synthesized FM/PCM/PCM3

Band	Stock #	Xtal #
50 MHz	FUTL7710	n/a
72 MHz	FUTL7708	n/a
Dimensions	Weight	Antenna
1.5 x 2.0 x 0.6 in (38 x 52 x 16 mm)	1.2 oz (33 g)	n/a

**Note:** "DF" or "DP" indicate dual-conversion receivers. Receivers and crystals are sold separately.

**Note:** Low = Channels 11-35; High = Channels 36-60

For receivers for discontinued radio systems, visit [www.futaba-rc.com](http://www.futaba-rc.com)

**Note:** Low = Ch 11-35; High = Ch 36-60  
Dual-conversion (DC) crystals are compatible with all Futaba dual-conversion receivers.

## Crystals

- Sets include both a standard-size transmitter crystal and a receiver crystal
- Receiver Crystals include either one short or one standard size crystal

Crystal Sets	Receiver Crystals
FUTL20** Dual Conversion FM Set 50, 72 & 75MHz	FUTL46** AM 27MHz
FUTL90** FM Set 27MHz	FUTL47** AM 72MHz Low
FUTL91** FM Set 75MHz	FUTL48** AM 72MHz High
FUTL92** AM Set 72 & 75MHz	FUTL49** AM 75MHz
FUTL93** AM Set 27MHz	FUTL51** FM 27MHz
FUTL95** FM Short Set 27MHz	FUTL52** FM 75MHz
FUTL96** FM Short Set 72MHz	FUTL56** FM DC 50MHz
FUTL97** FM Short Set 75MHz	FUTL57** FM DC 72MHz Low
	FUTL58** FM DC 72MHz High
	FUTL59** FM DC 75MHz
	FUTL61** FM 27MHz Short
	FUTL62** FM 72MHz Low Short
	FUTL63** FM 72MHz High Short
	FUTL64** FM 75MHz Short

## Receiver Crystal Case

Foam-lined and molded from impact-resistant plastic, with room for 12 Rx crystals and 2 CAMPac modules.  
Dimensions: 3.9 x 2.4 x 1.1 in  
(98 x 61 x 32 mm).



FUTM4600



# TRANSMITTER MODULES

## Frequency Specific Modules

• All modules include crystal

### For 3PK Systems:



**FUTL13\*\*** PK-FM  
27 & 75MHz FM/PCM/HRS



**FUTL14\*\*** PK-AM  
27 & 75MHz AM

### For 9C and 9C Super Systems:



**FUTL15\*\*** TP-FM  
50 & 72MHz FM/PCM  
Also compatible with: 5UAF/P; 7UAF/P (S);  
7UHF/P (S); 8UAF/P (S) & 8UHF/P (S)

### For 9Z WC2 Systems:



**FUTL17\*\*** TK-FM  
50 & 72MHz FM/PCM  
Also compatible with: 9VA/H

## Synthesized Modules

With a synthesized Tx module, there's no need to wait until "your" channel is free, because any free channel is yours to use. There's no need to change crystals, either — just dial up the channel you want!

### For 3PK Systems:



**FUTL8904** PK-FSM  
27MHz FM/PCM/HRS



**FUTL8905** PK-FSM  
75MHz FM/PCM/HRS

### For 9C and 9C Super Systems:



**FUTL8910** TP-FSM  
72MHz FM/PCM  
Also compatible with: 5UAF/P; 7UAF/P (S);  
7UHF/P (S); 8UAF/P (S) & 8UHF/P (S)

### For 9Z WC2 Systems:



**FUTL8900** TK-FSS  
72 MHz FM/PCM  
Also compatible with: 9VA/H

## Radio Frequency Ordering Information

### AIRPLANES (72 MHz)

Low Band		High Band	
Frequency Ch.	Frequency Ch.	Frequency Ch.	Frequency Ch.
72.010 11	72.270 24	72.510 36	72.770 49
72.030 12	72.290 25	72.530 37	72.790 50
72.050 13	72.310 26	72.550 38	72.810 51
72.070 14	72.330 27	72.570 39	72.830 52
72.090 15	72.350 28	72.590 40	72.850 53
72.110 16	72.370 29	72.610 41	72.870 54
72.130 17	72.390 30	72.630 42	72.890 55
72.150 18	72.410 31	72.650 43	72.910 56
72.170 19	72.430 32	72.670 44	72.930 57
72.190 20	72.450 33	72.690 45	72.950 58
72.210 21	72.470 34	72.710 46	72.970 59
72.230 22	72.490 35	72.730 47	72.990 60
72.250 23		72.750 48	

### CARS & BOATS (75 MHz)

Frequency Ch.	Frequency Ch.	Frequency Ch.
75.410 61	75.610 71	75.810 81
75.430 62	75.630 72	75.830 82
75.450 63	75.650 73	75.850 83
75.470 64	75.670 74	75.870 84
75.490 65	75.690 75	75.890 85
75.510 66	75.710 76	75.910 86
75.530 67	75.730 77	75.930 87
75.550 68	75.750 78	75.950 88
75.570 69	75.770 79	75.970 89
75.590 70	75.790 80	75.990 90

To order a radio system, receiver or transmitter module on a specific frequency, combine the system's 6-character stock number with the desired channel number.  
Ex: FUTK6232 = a 6EXP radio (FUTK62\*\*) on channel 32.  
On 72MHz systems, please specify High or Low Band.

### 6-METER FREQUENCIES (50 MHz)

Frequency Ch.	Frequency Ch.
50.800 00	50.820 01
50.840 02	50.860 03
50.880 04	50.900 05
50.920 06	50.940 07
50.960 08	50.980 09

6-meter frequencies require an FCC amateur radio license for operation

### AIRCRAFT OR SURFACE (27 MHz)

Frequency Ch.	Color
26.995 A1	Brown
27.045 A2	Red
27.095 A3	Orange
27.145 A4	Yellow
27.195 A5	Green
27.255 A6	Black

# G & GY SERIES GYROS

## Hassle-free heli operation – thanks to Futaba!

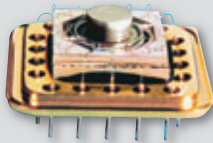
There's nothing like going out to the field to fly your favorite heli, and there's nothing like a Futaba gyro to make that experience even more enjoyable. Single-axis gyros give you the reliable performance you've come to expect from Futaba, whether you fly tiny electrics or larger .90-sized aerobatic models.

### GY Series Gyros



#### For better-than-piezo performance!

Unlike standard piezo gyros with a few sensor nodes, SMM-manufactured GY Gyros feature a whopping 18 sensor nodes, all mounted on a machined, high-density chip the size of a pencil point! The end result: unprecedented levels of functionality, reliability and sophistication.



Introduced in 2000, Futaba GY gyros have set the standard for performance. Their expanded number of sensor nodes makes them exceptionally sensitive, capable of detecting even the slightest changes in position. By contrast, SMM mounting provides GY resonators with superior shock- and vibration-resistance — a key factor in the GY Gyro's exceptionally precise, accurate performance.



#### Exclusively by Futaba!

All Futaba SMM (Silicon Micro Machine) gyros feature AVCS, the most positive form of tail control available for hovering and crosswind flying. Sensors send a constant stream of data to the servo, even when the tail is at rest. This allows the gyro to automatically trim for side winds or drifts, virtually eliminating the need for pilots to perform trim changes.

### GY611 Gyro w/S9256 Servo

- High-resolution, 12-bit A/D microprocessor w/760 ms pulse rate.
- Set-up on amp, or remotely from 14MZ, 12FG, 12Z, 9Z and 9C Super systems.
- Aeroform case for easier mounting and better vibration-resistance.
- LCD w/Adjustable Contrast
- Gyro and Rudder Gain\*
- Normal/AVCS/CMT Modes\*
- Control Delay
- Gain Tracking
- F3C or 3D Flight Modes
- AVCS Sense
- Servo EPA
- Remote Function
- Low Battery Alarm



FUTM0825

**Amp Dimensions/Weight:** 2.3 x 1.3 x 0.6 in/1.2 oz  
**Sensor Dimensions/Weight:** 1.2 x 1.2 x 0.7 in/1.1 oz

### GY240



FUTM0809

- Gain Adjustment
- AVCS/Normal Modes
- Normal/Reverse Rotation

**Dimensions:** 1 x 1 x 0.8 in  
**Weight:** 0.88 oz

### GY401



FUTM0807

**Dimensions:** 1 x 1 x 0.8 in  
**Weight:** 0.95 oz

- Available alone or with S9254 digital servo (FUTM0808)
- Gain Adjustment
- AVCS/Normal Modes
- Normal/Reverse Rotation
- DS (Digital Servo) On/Off
- Servo EPA
- Control Delay

### G190 Micro Piezo Gyro

- Ideal for electric helis – thanks to its light (¼ oz.) weight and small (0.9 in.) size!
- Ingenious case design offers virtually unlimited mounting options.
- Adjustable Gain
- Set-up LED



FUTM0830

**Dimensions:** 0.87 x 0.90 x 0.35 in  
**Weight:** 0.24 oz



# ON-BOARD ELECTRONICS

## FSU-2 Micro Fail-Safe

Runaways can be dangerous and costly, unless there's an FSU-2 on-board. If it detects interference or low voltage, it automatically throttles back to a user-selected setting. One-button programming and a status LED speed and simplify set-up...and installation requires only plugging in and mounting with double-sided tape. Its small size and weight make the FSU-2 ideal for any car or truck and compatible with both 4.8V and 6.0V receiver packs.



FUTM0992

**Dimensions:** 0.6 x 0.9 x 0.3 in (16 x 22 x 0.3 mm)  
**Weight:** 0.18 oz (5 g)

## SR10 Dual Servo Reverser

The SR10 delivers precision dual servo control without any special mixing. Ideal for two-servo control surfaces or twin-engine throttles, it controls two servos from a single channel without the need for special motors or transmitter mixing. Easy to install and equally useful in cars, boats and large-scale aircraft, it features adjustable neutral trim and an RF noise filter for signal clarity.



FUTM4150

**Dimensions:** 0.9 x 1.5 x 0.4 in (23 x 38 x 9 mm)  
**Weight:** 0.9 oz (26 g)

## MSA-10 Servo Synchronizer

Match servo performance and precision with the MSA-10! You can synchronize the operation of up to 4 servos and control them all from a single channel. Separate end point and travel adjustments for each servo ease set-up and improve precision. Reversing allows you to mount servos for maximum ease and efficiency. The MSA-10 can be powered by the receiver battery, or by a separate pack.



FUTM4155

**Dimensions:** 0.8 x 1.5 x 0.6 in (21 x 39 x 15 mm)  
**Weight:** 0.5 oz (13 g)

## GV-1 Governor

• More precise, consistent control — automatically!

Futaba's GV-1 is used to maintain a constant rotor head speed for improved flight performance. It turns on and off from the throttle stick and holds rpm to within +/- 1% of the value you set. Works in a 1,000-2,100 rpm range. Includes control amp, sensor, mounting brackets for .30 and .60 models, magnets and a small screwdriver. Requires 3.8-.6.0V power and draws 40mA @ 4.8V. **Sensor Magnet Bracket** includes all GV-1 parts except control amp. Also available: **Replacement Magnets**.



FUTM1001

**Sensor:** 0.3 x 0.4 x 0.6 in (8 x 10 x 16 mm)  
**Control Amp:** 2.2 x 1.2 x 0.6 in (57 x 31 x 16 mm)  
**Weight:** 1.34 oz (38 g)  
**FUTM1101** GV101 Sensor Magnet Bracket  
**FUTM1105** AB0937 GV-1 Magnet (2)

## MPDX1 Multi-Proportional System 8-Channel Decoder

For use with the 12Z, 14MZ and FX-40 radio systems, this versatile decoder is the perfect way for large-scale plane, jet and heli pilots to add seven more channels to any Futaba FM, PCM 1024 or PCM 2048 receiver. All added channels are fully proportional and switch selectable, plus they feature EPA, ATV and fail-safe. Easy to set up, it's preset for PCM 2048 resolution and includes other features such as linear operation and 8-channel servo operation with only 1 channel. Operating control setting, direction of operation change and travel are also possible for each multi-prop expanded channel. R5014DPS and R5114DPS receiver owners can realize the MPDX1's maximum potential — up to 28-channel expansion!



FUTM4158

**Dimensions:** 1.2 x 1.6 x 0.62 in (30 x 39 x 16 mm)  
**Weight:** .031 oz (14 g)

## Brushed Electronic Speed Controls

With Futaba Electronic Speed Controls (ESCs), enjoying smooth, proportional control of acceleration is as easy as the push-button set-up that precedes it. Heat sinks, powerful FETs and high-frequency switching provide cool, efficient operation. Reversible ESCs include a lock-out that allows drivers to move from sport driving to club racing with a touch, while the **MC850C Programmable Competition ESC** features a digital set-up system, ATL brake travel adjustment, plus low voltage, power on and heat protection. Optional **CIU-2 PC Interface** adds serial communication functions. All ESCs include screwdriver, capacitor, Schottky diode, double-side tape and power switch.



FUTM0922



FUTM0932

- Forward/Reverse/Brake
- 1.5kHz Switching Rate
- 5.0V BEC
- Reverse Lock-Out for ROAR-legal racing
- Auto Cut-Off cuts motor power when voltage drops

- Protected against short circuits, current and heat overload
- Signals that receiver is not turned off with sound alarm and vehicle "pulsing"
- Futaba J receiver, bullet motor and JST battery connectors installed



FUTM0950



FUTM0951

- Developed for high-performance competition racing
- SMD MOSFETs for minimal losses and maximum power
- 6.0V BEC
- Operates with 4-7 cell (4.8V-8.4V) NiCd & NiMH batteries
- For brushed motors 5 turns and up
- Current limit with timer
- Neutral brake
- External solder points with 12AWG silicone flex wire
- Customize your MC850C settings
- Windows®-compatible
- Data logging function — Data read and erase
- Variable frequency range setting: 100Hz — 10KHz
- Low battery voltage protection setting: 2.5V — 6.0V
- Current limiter: 50A; 300A; cancel
- Brake MAX duty: 0% - 100%
- Neutral Brake: 0 — 100%
- Software can be downloaded at [www.futaba-rc.com](http://www.futaba-rc.com) FREE!

Stock#	Model#	Dimensions	Weight	Capacity	Motor Limit	Current (fwd/rev)	Wire
FUTM0922	MC230CR	1.1 x 1.30 x 0.50 in (27 x 13 x 34 mm)	1.6 oz (44 g)	6-7 cells	20+ turns	90A/45A	16 ga.
FUTM0932	MC330CR	1.1 x 1.30 x 0.50 in (27 x 13 x 33 mm)	1.6 oz (44 g)	6-7 cells	15+ turns	200A/100A	14 ga.
FUTM0950	MC850C	1.1 x 1.0 x 0.57 in (29 x 26 x 15 mm)	0.62 oz (18 g)	4-7 cell	5+ turns	120A/-A	12 ga.

# 14MZ & 12Z

## ACCESSORIES & OPTIONS

### R5114DPS PCM G3 2048 Receiver

- Ball Grid Array (BGA) layered PC board technology eliminates pins to allow for a 14-channel receiver that's incredibly compact
- Wireless Frequency Setting System™ (WFSS) makes crystal-free channel changes fast and easy

**Weight:** 1.1 oz (32 g)

**Dimensions:** 1.5W x 2.1L x 0.6H  
(37.7 x 52.2 x 16.3 mm)

**FUTL7708** 72MHz

**FUTL7710** 50MHz



### 32MB Data-Pack Memory Card

- Plug-in capacity and convenience for storing programming and images for up to 100 additional models
- Up to 24 voice prompts and extended musical or verbal sequences as Windows Media Audio (WMA) files
- Downloaded upgrades for programs and functions

**FUTM9410**



### Lithium-Ion Tx Battery

- Stores power for up to 3 hours of flight per charge
- Includes unique slide charge indicator

**Capacity:** 7.4V/200mAh

**Dimensions:** 2.7W x 1.5L x 0.79H in  
(68.6 x 38.1 x 20.1 mm)

**FUTM1475**



### Tx Battery Charger

- Recharges the 12Z and 14MZ's 2200mAh Lithium-Ion pack in about one hour
- Indicator light turns off when charging is complete

**Input:** 100-240V AC current (50/60Hz)

**Output:** 8.4V, 1.5A DC current

**FUTM1700**



### NR4F1500 NiCd Rx Battery

**Capacity:** 4.8V/1500mAh

**Dimensions:** 1.9W x 2.8L x 0.74H in (47 x 69 x 18.5 mm)

**Weight:** 4.1 oz (116 g)

**FUTM1285**



### Rx Battery Charger

- Recharges Rx battery (FUTM1285) overnight

**Input:** 120V AC current (60Hz)

**Output:** 5.8V DC current

**FUTM1705**



### CR-2500 Lithium-Ion Tx/Rx Charger

- Capable of charging the 14MZ's Tx and any 4-6 cell Rx pack or glow starter cell simultaneously
- Auto-stop uses constant current/constant voltage method for Lithium-Ion charging, and delta peak method for Rx NiCds and glow starter cells
- LCD displays input and output voltage, peak voltage and charge current, time and amount

**Requires:** 12V, 6A power  
**FUTM4168**



### Stylus/Wrench Box for 14MZ

- Rubber tip safely pinpoints desired functions on touch-screen
- Tool under tip easily tightens switch dress nuts
- Hollow handle stores L-wrenches for changing switch location and adjusting the antenna or stick tension

**FUTM5687**



### Transmitter Display Screen Cleaner

- Made of super-soft synthetic suede for scratch-free cleaning

**Dimensions:** 7.5W x 8.1L x 0.04H in (191 x 205.7 x 1.0 mm)

**FUTM5720**



### DSC/Charge Adapter Cord

- Charge adapter for 4VF, 6EX, 7C, 9C Super, 9Z, 12FG, 12Z and 14MZ

**FUTM4243**



### ANT-12 Antenna for 12Z & ANT-17 Antenna for 14MZ

**FUTM5110** ANT-12

**FUTM5120** ANT-17



### Transmitter Neck Strap

- Adjustable length for customized feel

**FUTM5693**



### Heavy-Duty Switch Harness

- Heavy-gauge wiring and pre-soldered connectors for quality and reliability

**FUTM4387**





# TRANSMITTER ACCESSORIES

## Trainer Cords & Trainer Box

Trainer Cords are the learning link between student and instructor! Cords are available in four connector combinations that can make any two Futaba aircraft systems a teaching-learning pair.



FUTM4376

### FM Trainer Box

*Looks and feels like a standard 4-channel radio, but includes only what a student pilot needs to train economically with an instructor — no receiver, servos, batteries or antenna. Requires trainer cord and compatible master radio.*



FUTM4405

### MMTc-FG Cord

Square Micro/12FG  
For: Connects 4EX, 6EX, 7C and 9C systems to the 12FG



FUTM4410

### MTFM Cord

Round/Round  
For: Most earlier Futaba radios



FUTM4415

### MMTc Cord

Square Micro/Square Micro  
For: Connecting newer systems



FUTM4420

### MDTC Cord

Round/Square Micro  
For: Connecting newer systems to "round plug" systems

## Radio Bags

### 3PK Transmitter Bag

*Created for the 3PK, but movable foam blocks allow use with any 2- or 3-channel pistol-grip radio. Black nylon construction with rigid sides, carrying handle, and adjustable shoulder strap.*

Measures: 15 x 8.8 x 6 in  
(380 x 225 x 150 mm)

FUTP1000



### Universal Carrying Bag

*Made of tough, reinforced nylon. Includes five 10" x 12" sheets of foam to customize space, and a hook & loop-sealed 4.5" x 6.7" pouch for safe, easy storage of cords, crystals and other accessories.*

FUTP1001



## Metal Transmitter Cases

- All feature brushed aluminum exteriors with foam-padded interiors
- Lockable latches and two keys included



### Team Single Case

Measures: 15.1 x 10.3 x 6.2 in  
(385 x 230 x 160 mm)

FUTP1015



### 14MZ Single Case

Measures: 16.0 x 11.8 x 6.8  
(405 x 300 x 175 mm)

FUTP1018



### 3PK Case

Measures: 15 x 10.6 x 6.3 in  
(380 x 270 x 160 mm)

FUTP1010



### Team Double Case

Measures: 17.6 x 7.9 x 9.6 in  
(445 x 200 x 245 mm)

FUTP1020



### 12Z Single Case

Measures: 16.5 x 11.8 x 6.8  
(420 x 300 x 175 mm)

FUTP1017

## Dry Cell Battery Cases



### S30050

UM3 Tx Battery Case 8-Cell Dry  
For: 2PB/KA, 2PD/F, 3PB, 5UAF/P,  
6NHP, 7UAF/P/FS/PS

FUTM1560



### 8-Cell Dry Transmitter Battery Holder

For: 3PK

FUTM1563



### S10730

8-Cell Dry Slant Tx Battery Case  
For: 2PB/KA

FUTM1580



### FBB1

4-Cell Dry Rx Case • BEC Connector  
For: 2ER/FR/PH/PHKA, 3FR

FUTM1590



### FBB2

4-Cell Dry Rx Case • J Connector  
For: 3PK

FUTM1595

# FLIGHT PACKS

## Fly every model in your hangar with just one radio!

Less work than moving equipment from model to model, more affordable than assembling sets piece by piece, Futaba Flight Packs bring together the essentials of on-board gear in a single, convenient package. Add your own receiver crystal and you're ready to fly.

**NOTE:** Low Band version can be used only with crystals for Channels 11-35. High Band version can be used only with crystals for Channels 36-60.

## Micro Flight Packs

### Ultra Micro Flight Pack

Features micro servos with lightweight micro plugs

- R124F Receiver
- (2) S3111M Servos

**FUTL0211** Low Band  
**FUTL0236** High Band



### Micro Flight Pack

Equipped with high-torque servos

- R114F Receiver
- (2) S3114 Servos
- Switch Harness
- Servo Accessories

**FUTL0605** Low Band  
**FUTL0606** High Band



## 8-Channel Dual Conversion Flight Packs

R168DF universal receivers accept either high- OR low-band crystals

### Airplane Flight Pack

- R168DF Receiver
- (4) S3004 Servos
- Switch Harness
- 9" Servo Extension
- Servo Accessories



**FUTL1100**  
**Note:** Rx NiCd required

### Airplane Flight Pack w/Rx Pack

- R168DF Receiver
- (4) S3004 Servos
- 600mAh Rx NiCd (NR-4QB) Battery
- Switch Harness
- 9" Servo Extension
- Servo Accessories



**FUTL1105**

### Helicopter Flight Pack

- R168DF Receiver
- (5) S3001 Servos
- 1000mAh Rx NiCd (NR-4RB) Battery
- Switch Harness
- 9" Servo Extension
- Servo Accessories



**FUTL1110**

### Airplane Flight Pack with Digital Servos

- R168DF Receiver
- (4) S3151 Servos
- 1000mAh Rx NiCd (NR-4RB) Battery
- Switch Harness
- 9" Servo Extension
- Servo Accessories



**FUTL1115**



# TRANSMITTER AND RECEIVER NiCd BATTERY PACKS

## Unbeatable Sanyo® Quality – For An Unbeatable Price!

Discerning modelers know Sanyo battery packs set the standard in reliability and performance, but how? Quad-welded tabs offer users the increased vibration-resistance and durability they demand. Futaba goes the extra mile by also including strain-relief covers and heavy-duty shrink wrap.



## Receiver NiCds

Most packs include a Futaba J connector. Exceptions noted.



**NR4K**  
FUTM1210  
Flat Pack  
4.8V/250mAh  
1.3 x 2.3 x 0.6 in  
(32 x 58 x 15 mm)  
2.0 oz (57 g)



**NR4S250**  
FUTM1215  
Square Pack  
4.8V/250mAh  
1.1 x 1.1 x 1.3 in  
(29 x 29 x 33 mm)  
1.8 oz (51 g)



**NR4J**  
FUTM1280  
Flat Pack  
4.8V/600mAh  
2.0 x 2.3 x 0.6 in  
(51 x 58 x 15 mm)  
3.4 oz (95 g)



**NR4F1500**  
FUTM1285  
Flat Pack  
4.8V/1500mAh  
1.9 x 2.8 x 0.7 in  
(47 x 69 x 19 mm)  
4.1 oz (116 g)



**NR4M**  
FUTM1290  
Flat Pack  
4.8V/500mAh w/G  
connector  
2.0 x 2.3 x 0.6 in  
(51 x 58 x 15 mm)  
3.4 oz (96 g)



**NR4QB**  
FUTM1295  
Square Pack  
4.8V/600mAh  
1.1 x 2.0 x 1.1 in  
(28 x 51 x 28 mm)  
3.4 oz (96 g)



**NR4RB**  
FUTM1380  
Flat Pack  
4.8V/1000mAh  
1.9 x 2.8 x 0.7 in  
(47 x 69 x 19 mm)  
4 oz (112 g)



**NR5F600**  
FUTM1381  
Flat Pack  
6.0V/600mAh  
1.3 x 3.4 x 0.7 in  
(32 x 85 x 18 mm)  
3.5 oz (100 g)



**NR5T600**  
FUTM1383  
Hump Pack  
6.0V/600mAh  
1.2 x 2.0 x 1.3 in  
(31 x 51 x 32 mm)  
3.5 oz (100 g)



**NR5RB**  
FUTM1385  
Hump Pack  
6.0V/1000mAh  
1.9 x 2.1 x 1.3 in  
(47 x 52 x 33 mm)  
5.0 oz (141 g)



**NR5U50**  
FUTM1200  
6V/50mAh  
0.7 x 1.7 x 0.9 in  
(18 x 41 x 20 mm)  
0.7 oz (20 g)



**NR5V120**  
FUTM1205  
6V/120mAh  
0.7 x 1.7 x 0.9 in  
(17 x 44 x 22 mm)  
1.1 oz (32 g)

## Transmitter NiCds

Most packs include a Futaba J connector. Exceptions noted.



**NT8H**  
FUTM1430  
Flat Pack  
4FG, 5FGK, 6FGK, 7FG,  
8SSA/GAP  
9.6V/500mAh w/2-pin connector  
5.9 x 0.6 x 1.7 in  
(150 x 15 x 43 mm)



**NT8F600B**  
FUTM1440  
Flat Pack  
4YF, 6YG/YF  
9.6V/600mAh  
w/J connector  
4.5 x 0.56 x 2 in  
(114 x 14 x 51 mm)



**NT8LP**  
FUTM1450  
Square Pack  
2PD/PKA, 3PB/UCP/PG, 4NL,  
5UAF/UAP/NLH/NLP, 6NHP/  
NLK, and 7UAPS/UAFS/UHFS  
9.6V/500mAh w/9V connector  
4.4 x 1.2 x 1.2 in  
(112 x 31 x 31 mm)



**NT8S600B**  
FUTM1457  
Square Pack  
6DA/NPK/YF, 7NFK and all  
8UA/H radios  
9.6V/600mAh w/J connector  
4.1 x 1.3 x 1.2 in  
(104 x 33 x 31 mm)



**NT8S700B**  
FUTM1460  
Square Pack  
6DA/VA/NFK/NPK, 7NFK, 8U  
and 9C/VAP(S)/VNP(S)  
9.6V/700mAh w/J connector  
4.1 x 1.3 x 1.2 in  
(104 x 33 x 31 mm)



**NT8F700B**  
FUTM1462  
Flat Pack  
3PK/PM/VCS and 6EXP/EX 2.4  
9.6V/700mAh w/J connector  
4.5 x 0.56 x 2 in  
(114 x 14 x 51 mm)



**NT8JY**  
FUTM1463  
Flat Pack  
6VA/NPK/NFK, 7NFK, 8UA/H/  
US and 9VAP(S)/VHP(S)  
9.6V/600mAh w/2-pin  
connector  
4.5 x 0.6 x 2 in  
(114 x 15 x 51 mm)



**NT8IB**  
FUTM1465  
Square Pack  
6VA/NPK/NFK, 7NFK, 8UA/  
H/US and 9VAP(S)/VHP(S)  
9.6V/600mAh w/J  
connector  
4 x 1.1 x 1.2 in  
(102 x 28 x 31 mm)



**NT8F1100B**  
FUTM1468  
Flat Pack  
3PK/PM, 6EXP/EX 2.4  
9.6V/1100mAh w/J  
connector  
4.5 x 0.6 x 2 in  
(114 x 15 x 51 mm)



**NT8S1100**  
FUTM1470  
Square Pack  
9Z  
9.6V/1100mAh w/5-pin  
connector  
4.8 x 1.4 x 1.4 in  
(122 x 36 x 36 mm)

# BATTERY CHARGERS/ DISCHARGERS

## CR-2000 Peak Charger

- Push-button peak charging and jog-dial programming for NiCd or NiMH radio packs and glow starter cells!
- Peaks a Tx and Rx pack, or Tx pack and glow starter cell at the same time!
- Alert sounds when peak charging ends and trickle starts!
- Backlit LCD shows 6 critical pieces of cell/pack data: input, output and peak voltages and charge rate, time and capacity
- Includes thermal and reverse polarity protection



FUTM4160

**Input Voltage:** 11-15V DC

**Capacity:** 6-8 cell, 500-2000mAh (Tx); 4-6 cell, 50-2000mAh (Rx); and 1-cell, 1000-2500mAh (glow cells)

**Charge Current:** 0.5A-2A (Tx); 0.05A-2A (Rx, glow cell)

**Trickle Current:** 5mA (at 0.05-0.45A); 70mA (at 0.5-2.5A)

**Dimensions:** 6.0 x 3.4 x 1.4 in (150 x 85 x 35 mm)

**Weight:** 12.5 oz (355 g)

**Includes:** power cord w/alligator clips and 12V car adapter, 28 in (710 mm) Tx charge cord and 20 in (510 mm) and 80 in (2030 mm) Rx charge cord adapters

## CR-2500 Charger/Discharger/Cycler

- Charges 4-6 cell Rx packs, glow starter cells and Lithium-Ion Tx packs for the 12Z, 14MZ and FX-40 —cycles and discharges Rx packs, too
- Design allows simultaneous TX/Rx or Tx and glow cell charging
- Easy jog-dial programming and push-button start
- Automatically stops charging for NiCd/NiMH Rx packs and glow cells at peak — by cc/cv (constant current/constant voltage) method & timed charging for the Lilon TX pack
- LCD displays input, output and peak voltages, as well as charge time, current and capacity, plus error messages



FUTM4168

**Input Voltage:** 11-15V DC

**Capacity:** 7.4V 2200mAh (Fut. Tx pack); 4-6 cell, 50-2000mAh (Rx); 1-cell, 1000-2500mAh (glow)

**Charge Current:** 0.1-1.5A (Tx); 0.05-2A (Rx); 1-2.5A (glow)

**Discharge Current:** 0.5A (Rx only)

**Dimensions:** 5.9 x 3.3 x 1.4 in (150 x 85 x 35 mm)

**Weight:** 12.9 oz (365 g)

**Includes:** alligator clips and 12V car adapter, Tx charge adapter & Futaba male/female adapters.

## BR-2000 Checker/Discharger

- Push-button ease for 4-6 cell NiCd and NiMH Rx packs and single Lithium-Ion cells
- Backlit LCD glows red as it checks and blue during discharge
- Displays voltage for all cells, plus pack capacity for NiCds and NiMHs
- Adjustable 1-3A discharge rate, built-in fan and auto cut-off
- Color-coded outer ring shows voltage level at a glance



FUTM4165

**Dimensions:** 3.0 x 3.0 x 1.0 in (77 x 77 x 26 mm)

**Weight:** 4.4 oz (125 g)

## 9Z Charger

FUTM1825



## Dual Charger

FUTM1830



## HBC-2B(4) 12FG Tx Charger

FUTM1805



- 9Z and Dual chargers handle Tx and Rx NiCd packs singly or simultaneously
- HBC-2B(4) charges 12FG's NiMH Tx pack overnight
- All require AC power



# ROBOT & ACCESSORIES

## RBT-1™

### HUMANOID ROBOT

#### Fully assembled and ready to walk.

The RBT-1 robot needs only one more component to be complete: You to give the orders. You'll use the included, game-style controller to execute pre-programmed routines or those you program yourself with the supplied Motion Editor software for your Windows® PC.

- *FASST 2.4GHz radio signals direct its 20 servos for smooth, quick, precise control.*
- *Electronics for flexible 16-channel operation are located in the torso for easy access.*
- *Includes a rechargeable, high-capacity, 7.4V LiPo battery.*
- *Self-righting for continuous action.*
- *LED "eyes" add to the humanoid appearance*
- *Program routines on your PC!*



FUTX1000



#### Program these actions and more:

- |                          |              |
|--------------------------|--------------|
| • Walk                   | • Dance      |
| • Splits                 | • Headstand  |
| • Balance on one leg     | • Kick       |
| • Run                    | • Somersault |
| • Bow                    | • Jump       |
| • Forward/backward flips | • Turn       |

#### Robot Replacement Parts & Accessories

- FUTX1100** RPU-11 Processing Unit  
**FUTX1110** LBC-3E5 AC LiPo Charger  
**FUTX1115** PR4S780P 7.4V 780mAh LiPo Battery  
**FUTX1120** RS232C Interface Cable  
**FUTX1125** RRCT-11 Transmitter 2.4GHz  
**FUTX1130** RRCR-11 Receiver 2.4GHz

See the RBT-1  
in action at  
[www.2.4gigahertz.com!](http://www.2.4gigahertz.com)

## ROBOT SERVOS

### RS301CR

**Dimensions:** 1.5 x 0.8 x 1 in (37 x 20 x 25 mm)  
**Weight:** 0.9 oz (24 g)  
**Torque @ 7.4V:** 99 oz-in (7.13 kg-cm)  
**Speed @ 7.4V:** 0.11/60°  
**Rotational Range:** 300°  
**FUTX1001** RS301CR Servo 2 in Wire Extensions  
**FUTX1002** RS301CR Servo 4 in Wire Extensions



### RS302CD

**Dimensions:** 1.5 x 0.8 x 1 in (37 x 20 x 25 mm)  
**Weight:** 0.9 oz (24 g)  
**Torque @ 7.4V:** 70 oz-in (5.04 kg-cm)  
**Speed @ 7.4V:** 0.16/60°  
**Rotational Range:** 300°  
**FUTX1005** RS302CD Servo 2 in Wire Extensions  
**FUTX1006** RS302CD Servo 4 in Wire Extensions



### RS403PR High-Torque Digital MG

**Dimensions:** 1.6 x 0.8 x 1.5 in (40 x 20 x 37.6 mm)  
**Weight:** 2.2 oz (63 g)  
**Torque @ 6.0V:** 192 oz-in (13.8 kg-cm)  
**Speed @ 6.0V:** 0.13 sec/60°  
**Rotational Range:** 180°  
**FUTM0503**



### RS404PD High-Torque MG

**Dimensions:** 1.6 x 0.8 x 1.54 in (40 x 20 x 39 mm)  
**Weight:** 1.67 oz (47.5 g)  
**Torque (@6.0V):** 124 oz-in (8.9 kg-cm)  
**Speed (@6.0V):** 0.20 sec/60°  
**Rotational Range:** 150°  
**FUTM0504**



# More modelers insist on Futaba.

It's easy to see why nearly everyone you meet at the track, pond or flying field owns a Futaba radio. Whether it's price, ease of use or access to innovative programming functions for highly customized control, there's a Futaba system that will bring out the best in your model.

## Team Futaba is here for YOU.

*Comprised of expert modelers in racing, flying and boating, Team Futaba is a major presence at R/C events all over the country. Feel free to ask questions or to get advice that will help you enjoy your modeling even more!*



Frank Noll,  
Team Manager



Greg Hahn



Jerry Dunlap



Jason Shulman



Andrew Jesky



Ryan Maifield



Taylor James



Jared Tebo

## Visit Futaba online.



*Looking for details about Futaba's selection of radios, servos, parts and accessories? It's all as close as your computer.*

[www.futaba-rc.com](http://www.futaba-rc.com)

[www.2.4gigahertz.com](http://www.2.4gigahertz.com)

[www.14mz.com](http://www.14mz.com)

[www.findfutaba.com](http://www.findfutaba.com)

## Specialists in fast, friendly service.

In the unlikely event that your Futaba equipment ever requires service, you can count on Futaba's exceptional Service Center to get you back into the action fast.

Staffed by expert technicians and equipped with the most advanced diagnostic tools, the Service Center gives your Futaba radio system the knowledgeable care that it deserves. If a repair is needed, they get it right the first time.

And the Service Center's location in the central United States means that shipping to most areas of the country takes only two days. You get your return package fast — without paying high overnight shipping charges.

**Futaba Service Center USA**  
3002 N. Apollo Dr. Suite 1, Champaign, IL 61822



## One Year Limited Warranty

Futaba digital proportional R/C systems are warranted to the original purchaser for one full year from the date of purchase against defects in material and workmanship. During this period Futaba will repair or replace, at our discretion, the defective component.

This warranty does not apply to improperly installed, handled or abused systems, radios which have been damaged in a crash, nor to any unit which has been repaired or altered by unauthorized agencies. Under no circumstances will the buyer be entitled to consequential or incidental damages. This limited warranty gives you specific legal rights; you may have other rights which vary from state to state. Batteries and plastic housings are not covered by warranty.

This warranty applies to Futaba products purchased and used in the United States, Canada and Mexico.

# Futaba®