

Futaba

FP-T4FN-72 (4CH)
FP-T6FN-72 (6CH)

72.160 RELEGAL (44) (18-20)
72.030 12
(50) 72.080 (14) 1070
Dose

STEP# FIRST # IS YEAR
SECOND 2#s '19 MONTH



PCM 1024



FUTABA RAD THERE'S A NEW ER



RADIO CONTROL COMES OF AGE.

Explore the new possibilities in the world of radio control.

The latest construction techniques and materials make RC models lighter, faster and more maneuverable than ever before. Pylon racers fly at speeds over 200 MPH. Electric powered cars are racing at over 70 MPH!

THE USA PYLON Team, led by World Champion Dave Shadel, on the victory podium.



A new generation of RC enthusiasts are rewriting the record books.

Futaba has the new generation of radio control systems. Systems to handle the challenge of World Class competition.

WINNING THE WORLD OVER.

PCM, first introduced by Futaba, is now the only way to fly in FAI World's. World Champions Dave Shadel (USA/F3D Pylon) and Yukihiro Dobashi (Japan/F3C Helicopter) both won with PCM 1024, our second generation system. Our 9VA/PCM 1024 systems were also the unanimous choice of the USA Pattern Team.

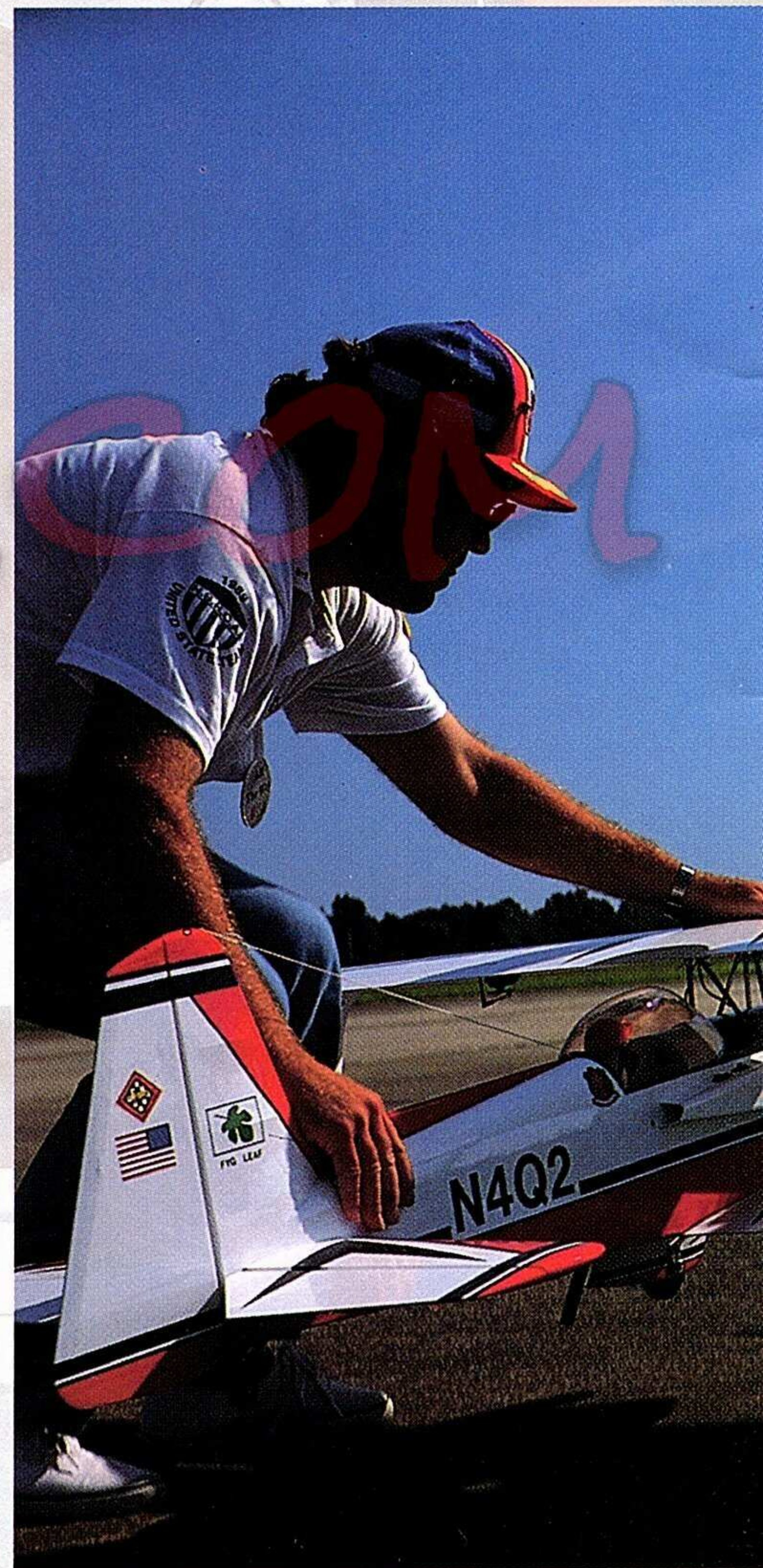
Our Magnum systems are no strangers to the winner's circle, either. Futaba racers have the PCM 1024 advantage with the Magnum 3PB, the most advanced pistolgrip system you can buy. Rugged, high output Futaba servos have steered RC cars to World Championships in 1:12, 1:10 offroad and 1:8 scale.

THE ELECTRONIC EDGE.

The PCM 1024 advantage is just one way Futaba radio control gives top competitors the edge.

To combat the effects of high speed vibration, we pioneered the use of surface mount technology (SMT) in the assembly of servos and receivers. Thanks to robotic SMT assembly, our servos are the most reliable and efficient we've ever made.

Our commitment to competition is obvious, but our electronic testing, research and development has benefits for all flyers.



That's why features like dual rates, ATV and servo reversing can now be found on many of our popularly priced systems.



THE USA PATTERN Team at the 1989 FAI World's performed with Futaba 9VA systems.

NO CONTROL. A ON THE HORIZON.



HANDS ON ENGINEERING.

State-of-the-art electronics are great, but putting them at your fingertips is more of a science.

Quick, precise maneuvers begin with a stable, comfortable grip.

Futaba transmitters are carefully designed and balanced, with their controls positioned for easy operation. The controls, in turn, are adjustable as well. Slantable gimbals with variable length sticks provide

Features to look for:

1024

Futaba's exclusive PCM 1024 is the result of years of design and development. PCM 1024 gives the serious enthusiast the ultimate in servo response and resolution to perform to World Class standards.

**20KHz
1991**

Futaba gets you ready for 1991 today. Every one of our aircraft systems is up to current 1991 specifications. And only Futaba technology can offer the sport flyer economically priced AM systems that are 1991 ready.

PCM

Pulse Code Modulation-Futaba pioneered the use of digitally encoded signals to greatly reduce interference. Now Futaba can provide every level of flyer or driver PCM performance and reliability.

a custom fit for different sized hands. Even the spring tension can be set for just the right feel. Steering wheels adjustable for lock-to-lock throw and rapid access dual rates let RC racers quickly adapt to track conditions.

EVERYTHING YOU NEED IN RADIO CONTROL.

Look through this catalog and you'll also find another important reason the experts choose Futaba. In addition to the most extensive line of complete systems, we also have the most extensive and versatile line of accessories. MOS/FET electronic speed controls for electric cars, boats and planes, receivers, helicopter gyros and over a dozen different servos add limitless possibilities to your Futaba system.

AND MORE.

Because today's Futaba systems are better than ever before we can also back them better. New Futaba systems now carry a Full Year Warranty against manufacturing defects. Should you experience any problems, our new service facility in Irvine is the most advanced and efficient in the industry and is always ready to answer your questions.



**TEAM FUTABA'S
Chip Hyde is a fast-
rising young star
in international
pattern competition.**

Whether you dream of being the best or you're just a weekend hobbyist, now is the time to take on the new challenges of radio control.

Start with Futaba, the choice of RC enthusiasts that are as serious about their fun as you are.



1024

20KHz
1991

Programmable mixing switch

Snap roll switch

Elevator and rudder dual rates

Landing gear switch

Adjustable control sticks

Pitch control lever

Idle up lever

Slantable, ball bearing open gimbals

Built-in tachometer

Ergonomically designed case

Master LCD computer screen displays all electronic functions

Computer input keyswitches



9VA/9 Channel PCM 1024 Aircraft system. R129DP receiver, four S5101 servos, computer LCD screen, ATV, AFR, ATR, programmable gang mixing, variable pitch propeller mixing, dual rate(3), exponential, adjustable VTR, timer, snap roll(3), servo reversing, mutual mixing, plug-in RF module, DSC. All NiCd. 50 and 72MHz. (Also available with four 9101 servos.)

PCM 1024. THE NO. 1 CHOICE OF CHAMPIONS ALL OVER THE WORLD

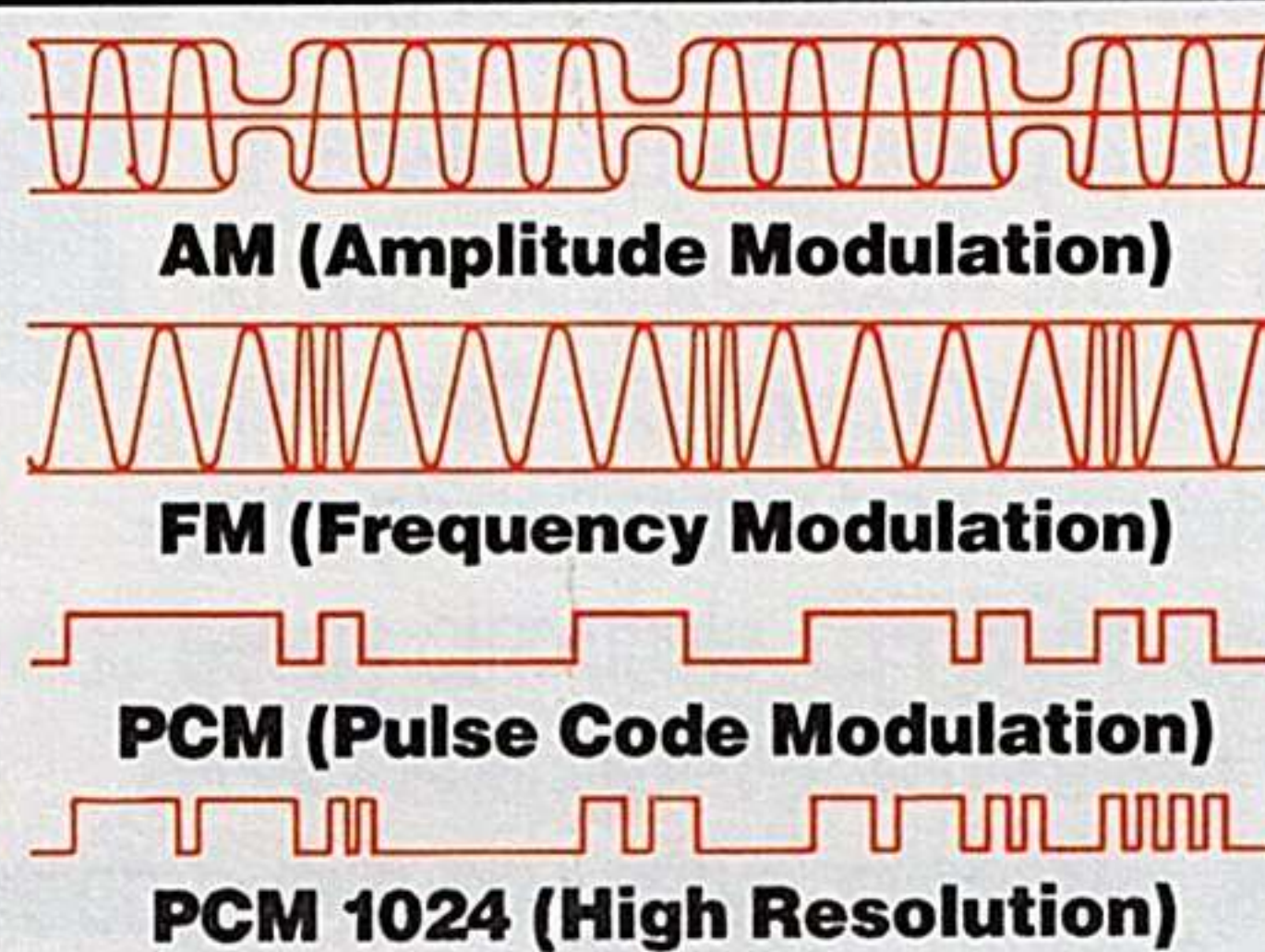
When Futaba introduced PCM 1024 it took the RC world by storm.

PCM 1024 is a true, second generation PCM system, designed to give experienced flyers the most accurate and responsive control possible. We accomplished that goal by developing our own, exclusive 10-bit microprocessor. The result is the ultimate in PCM performance, digitally encoded signal transmission with



WOLFGANG MATT of Liechtenstein flew PCM 1024 in F3A Pattern at the World Championships.

Signal Comparison



programmable fail safe plus the exceptional speed and response of PCM 1024.

HIGH PERFORMANCE AT THE HIGHEST LEVELS

PCM 1024 was first showcased in our incomparable 9VA system, selected for World Championship competition by the USA Pattern Team to win the team title and by top finalists like Wolfgang Matt, Ivan Kristensen and Giichi Naruke. The 9VA system is the ideal choice for the expert pattern

flyer, but is by no means the only Futaba system equipped with PCM 1024. In F3D Pylon competition, where the slightest glitch could mean disaster, Dave Shadel won the World's with a 5UAP. And in the F3C Helicopter the title went to Yukihiro Dobashi and his 9VH.

PCM 1024 or PCM.FM or AM. Only Futaba can offer this complete range of signal transmission choices. And every Futaba aircraft system has the advanced electronics and receivers to meet the 1991/20KHz specifications.

1989 WORLD CHAMPION Dave Shadel's F3D Pylon racer is ready for takeoff.



AIRCRAFT SYSTEMS



7UAP/7 Channel PCM 1024 Aircraft system. R129DP receiver, four S148 servos, computer LCD screen, ATV, dual rate, exponential, programmable mixing, timer, snap roll(4), servo reverse, memory, plug-in RF module, trainer system. All NiCd. 50 and 72MHz.



7UAF/7 Channel FM Aircraft system. R128DF receiver, four S148 servos, computer LCD screen, ATV, dual rate, exponential, programmable mixing, timer, snap roll(4), servo reverse, memory, plug-in RF module, trainer system. All NiCd. 50 and 72MHz.



5UAP/5 Channel PCM 1024 Aircraft system. R129DP receiver, four S148 servos, control panel with ATV, dual rate and servo reverse, plug-in RF module, trainer system. All NiCd. 50 and 72MHz.



5UAF/5 Channel FM Aircraft system. R128DF receiver, four S148 servos, control panel with ATV, dual rate and servo reverse, plug-in RF module, trainer system. All NiCd. 50 and 72MHz.



5UA/5 Channel AM Aircraft system. R117H receiver, four S148 servos, control panel with ATV, dual rates and servo reverse, plug-in RF module, trainer system. All NiCd. 72 and 75(surface)MHz.



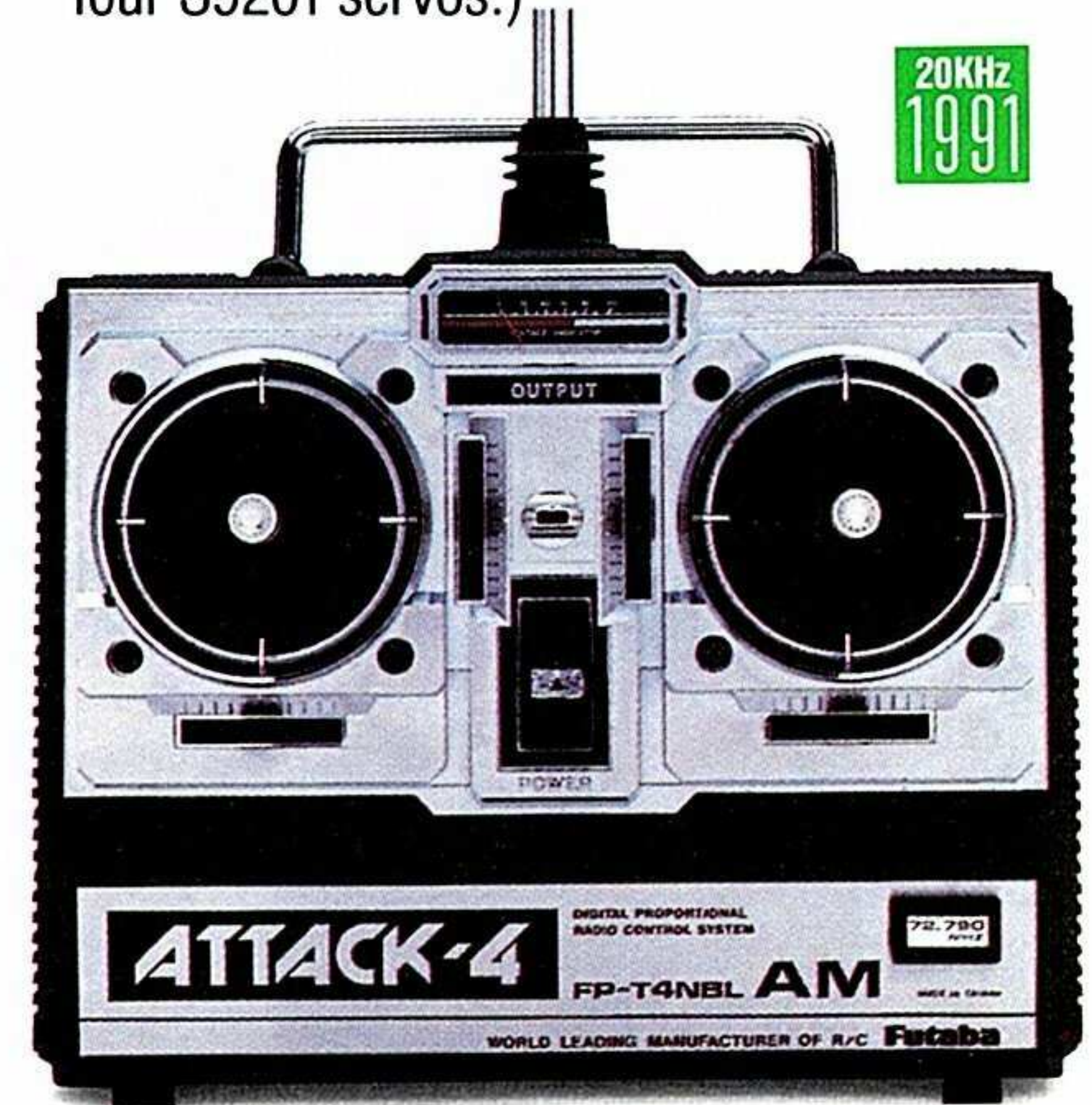
8SSA/8 Channel PCM Single Stick system. R128DP receiver, four S5101 servos, dual rate, VTR(3), mixing(7), ATL, ATV, DSC, servo reverse, tachotimer, plug-in RF module. All NiCd. 50 and 72MHz. (Also available with four S9201 servos.)



4NBL Attack S/4 Channel AM Aircraft system. R114H receiver, three S148 servos, servo reverse. Transmitter NiCd. 72 and 75 (surface) MHz.



4NBL Attack E/4 Channel AM Electric Aircraft system. MCR-4A receiver/speed control, two S133 servos, servo reverse. Transmitter NiCd. 72MHz.



4NBL Attack G/4 Channel AM Glider system. R114H receiver, two S133 servos, servo reverse, 250mAh and transmitter NiCd. 72MHz.

CONQUEST SYSTEMS



20KHz
1991

PCM



20KHz
1991

PCM



20KHz
1991

6NFK Conquest/6 channel FM Aircraft system. R127DF receiver, four S148 servos, adjustable sticks, retract switch, dual rates (2), servo reverse, trainer system. All NiCd. 50 and 72MHz.

4NBP Conquest/4 channel PCM Aircraft system. R124DP receiver, three S148 servos, adjustable sticks, servo reverse, trainer system. All NiCd. 50 and 72MHz.

6NPK Conquest/6 channel PCM Aircraft system. R127DP receiver, four S148 servos, adjustable sticks, retract switch, dual rates (2), servo reverse, trainer system. All NiCd. 50 and 72MHz.

NEW

NEW

NEW

ULTRARC.COM



20KHz
1991

4NBF Conquest/4 channel FM Aircraft system. R127DF receiver, three S148 servos, adjustable sticks, servo reverse, trainer system. All NiCd. 50 and 72MHz.

NEW

	4FG (Old)	4FG (New)	4NBF	4NBP	5FGK (AM)	5FGK (FM)	5UA	5UAF	5UAP	6FG (Old)	6FG (New)	6FGK (AM)	6FGK (FM)	6NFK	6NPK	7FGK (AM)	7FGK (FM)	7FGHI (FM)	7UAF	7UHF	7UAP	7UHP	
4FG (Old)	●																						
4FG (New)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4NBF		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
4NBP				●											●				●	●	●	●	●
5FGK (AM)	●				●					●		●	●	●	●	●	●	●					
5FGK (FM)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
5UA		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
5UAF		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
5UAP				●											●				●	●	●	●	●
6FG (Old)	●				●					●		●	●	●	●	●	●	●					
6FG (New)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
6FGK (AM)	●				●					●		●	●	●	●	●	●	●					
6FGK (FM)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
6NFK															●				●	●	●	●	●
6NPK				●											●				●	●	●	●	●
7FGK (AM)	●				●					●		●	●	●	●	●	●	●					
7FGK (FM)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
7FGHI (FM)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
7UAF		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
7UHF		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
7UAP		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
7UHP		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

THE FUTABA TRAINER SYSTEM

The Futaba trainer system allows student and instructor to link their transmitters via a special cord (M-TC-AM for AM systems, M-TC-FM for FM/PCM). New encoder technology limits this use for some older units. This chart should be used to check compatibility or PPM/PCM setting.

- Systems are compatible
- Pulse Position Modulation must be set with mode selector
- ▲ Pulse Code Modulation must be set with mode selector



FUTABA FLYER
Yukihiro Dobashi of Japan won the F3C Helicopter World Championship.

HELICOPTER SYSTEMS



20KHz
1991

9VH/9 Channel PCM 1024 Helicopter system. R129DP receiver, five S9201 servos, computer LCD screen, ATV, AFR, ATR, programmable gang mixing, pitch mixing, CCPM mixing(5), dual rate(3), exponential, adjustable VTR, 4-way timer, snap roll(3), servo reverse, mutual mixing, DSC, 1000mAh receiver NiCd, plug-in RF module. 50 and 72MHz.



20KHz
1991

7UHP/7 channel PCM 1024 Helicopter system. R129DP receiver, five S5101 servos, computer LCD screen, ATV, dual rate, exponential, programmable mixing, timer, invert switch, hover memory, pitch mixing, tail rotor mixing, servo reverse, memory, trainer system, plug-in RF module 1000mAh receiver NiCd. 50 and 72MHz.



20KHz
1991

7UHF/7 Channel FM Helicopter system. R128DF receiver, four S5101 servos, computer LCD screen, ATV, dual rate, exponential, programmable mixing, timer, invert switch, hover memory, pitch mixing, tail rotor mixing, servo reverse, memory, trainer system, plug-in RF module 1000mAh receiver NiCd. 50 and 72MHz.



20KHz
1991

6NHP/6 Channel PCM Helicopter system. R128DP receiver, four S148 servos, invert switch, dual rate(2), mixing, servo reverse, plug-in RF module. All NiCd. 50 and 72MHz.



20KHz
1991

5NLH/5 Channel FM Helicopter system. R128DF receiver, four S148 servos, mixing(3), AST(2), hover memory(fixed), throttle hold, idle up, servo reverse. All NiCd. 50 and 72MHz.



20KHz
1991

8SSH/8 Channel Single Stick PCM Helicopter system. R128DP receiver, five S9201 servos, invert switch, dual rate/VTR, mixing, ATL, ATV, DSC, servo reverse, tachotimer, plug-in RF module 1000mAh receiver NiCd. 50 and 72MHz.

GYROS

G-132 Single axis gyro (standard)
G-152 Single axis gyro (PCM/FM)
 Power required: 4.8v shared (w/receiver) or 6.0v external
 Current drain: 20mA (amplifier at 4.8v) 100mA (motor)
 Gyro body: 1.57" x 1.65" x 1.34"/2.86 oz.
 Control amplifier: 1.73" x 2.28" x 0.63"/1.61 oz.
 Control box: 0.94" x 1.34" x 0.59"/0.54 oz.
 \$129.95

G133BB Ball bearing, single axis gyro (standard)
G153BB Ball bearing, single axis gyro (PCM/FM)
 Power required: 4.8v shared (w/receiver) or 6.0v external

Current drain: 20mA (amplifier @4.8v) 100mA (motor)
 Gyro body: 1.57" x 1.65" x 1.34"/2.86 oz.
 Control amplifier: 1.73" x 2.28" x 0.63"/1.61 oz.
 Control box: 0.94" x 1.34" x 0.59"/0.54 oz.
 \$149.95

G134 Single axis, 2-piece gyro (standard)
G154 Single axis, 2-piece gyro (PCM/FM)
 Power required: 4.8v
 Current drain: 20mA (amplifier) 100mA (motor)
 Gyro body: 1.57" x 1.65" x 1.60"
 Amplifier: 1.06" x 1.89" x 0.63"
 System weight: 3.6 oz.
 \$89.95



3PB

Plug-in RF Module (75MHz only)

1024

Steering wheel lock-to-lock adjustable

Rubber padded ulnar area

Hand strap

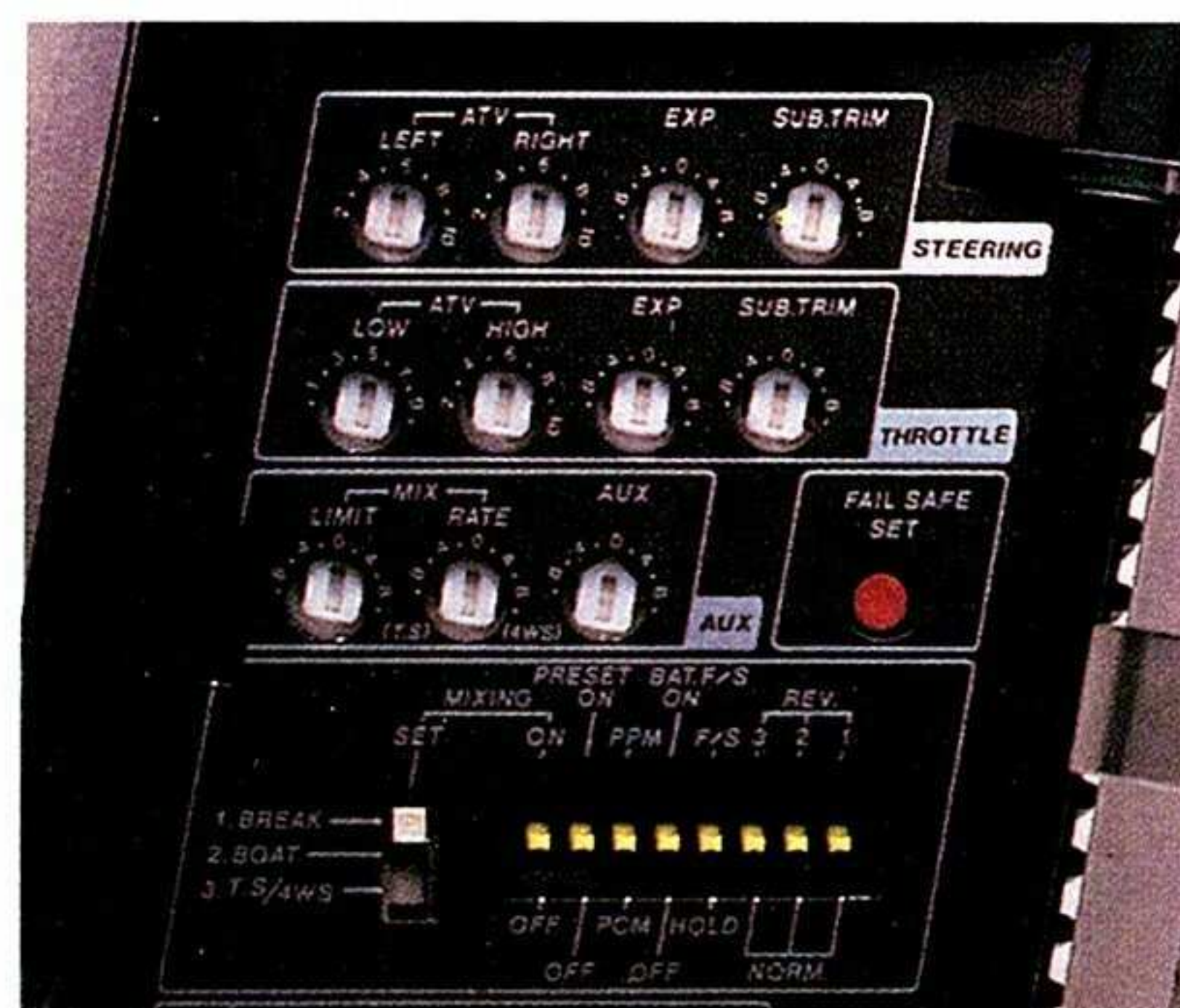
Steering dual rate

One-touch electronic trims are supplemented by audible signals, LED readouts and sub trimming for precise control.

Direct Servo Control



3PB Magnum/3 Channel PCM 1024 Pistol Grip system. R1131P BEC receiver, two S9601 servos, electronic trim with sub trim, programmable mixing for four wheel steering, boats, dual rate, exponential(2), servo reverse, plug-in RF module, adjustable steering lock-to-lock angle and throttle trigger position, DSC, transmitter NiCd. 75MHz only. (Also available with two S9301 or two S132H servos.)



The control panel of the Magnum PCM gives you access to every option imaginable. ATV, exponential and sub-trim let you fine tune steering and throttle servo action to suit your driving style, car or track.

IT'S LOADED

You're looking at the most potent pistolgrip radio you can buy.

When it comes to features and performance, it's loaded. But only the competition needs to be worried.

Futaba's Magnum PCM fires out its commands in high speed, high resolution 1024 Pulse Code Modulation.

Virtually stepless PCM 1024 is a Futaba exclusive, and for response and resistance to interference nothing even comes close.

And Futaba's pioneering efforts in PCM have also resulted in a remarkably compact 3 channel receiver.

On the track, Magnum PCM one-touch, electronic trim and adjustable dual rate give you precise control over changing conditions.

Steering wheel throw, spring tension and throttle limit can also be easily changed on the transmitter.

Another important feature is Direct Servo Control (DSC), which lets you check and adjust settings without turning the transmitter on.

Developed and competition-tested for all types of RC racing, the Magnum PCM can handle anything on wheels or water.

From high-powered 1:8 gas cars to high jumping 1:10 offroad racers, Futaba's reliable, surface-mounted electronics can take it. A complete selection of servos and MOS/FET speed controls is available.

We've even included twin-servo steering control, four wheel steer (4WS) differential and torque-steer compensation mixing for boats.

The Magnum PCM leads Futaba's extensive line-up of surface systems, which includes the new 2PD and 2PBKA pistolgrips and four dual stick models. Most offer a selection of servo options to best suit your model.

And for electric cars and boats, the Magnum Junior and Magnum Sport are also available with our MC112B MOS/FET electronic speed control.

SURFACE SYSTEMS



2PD Magnum/2 channel Pistol Grip system. R102JE BEC receiver, two S9301 servos, dual rate, sub trim, servo reverse, ATV(2). 27 and 75MHz. (Also available with two S9601 or two S132H servos.)



2PBKA Magnum Junior/2 Channel Pistol Grip system. R102JE BEC receiver, two S148 servos, steering dual rate, fine trim, throttle ATV, servo reverse. 27 and 75MHz. (Also available with two S132H or two S9601 servos.)



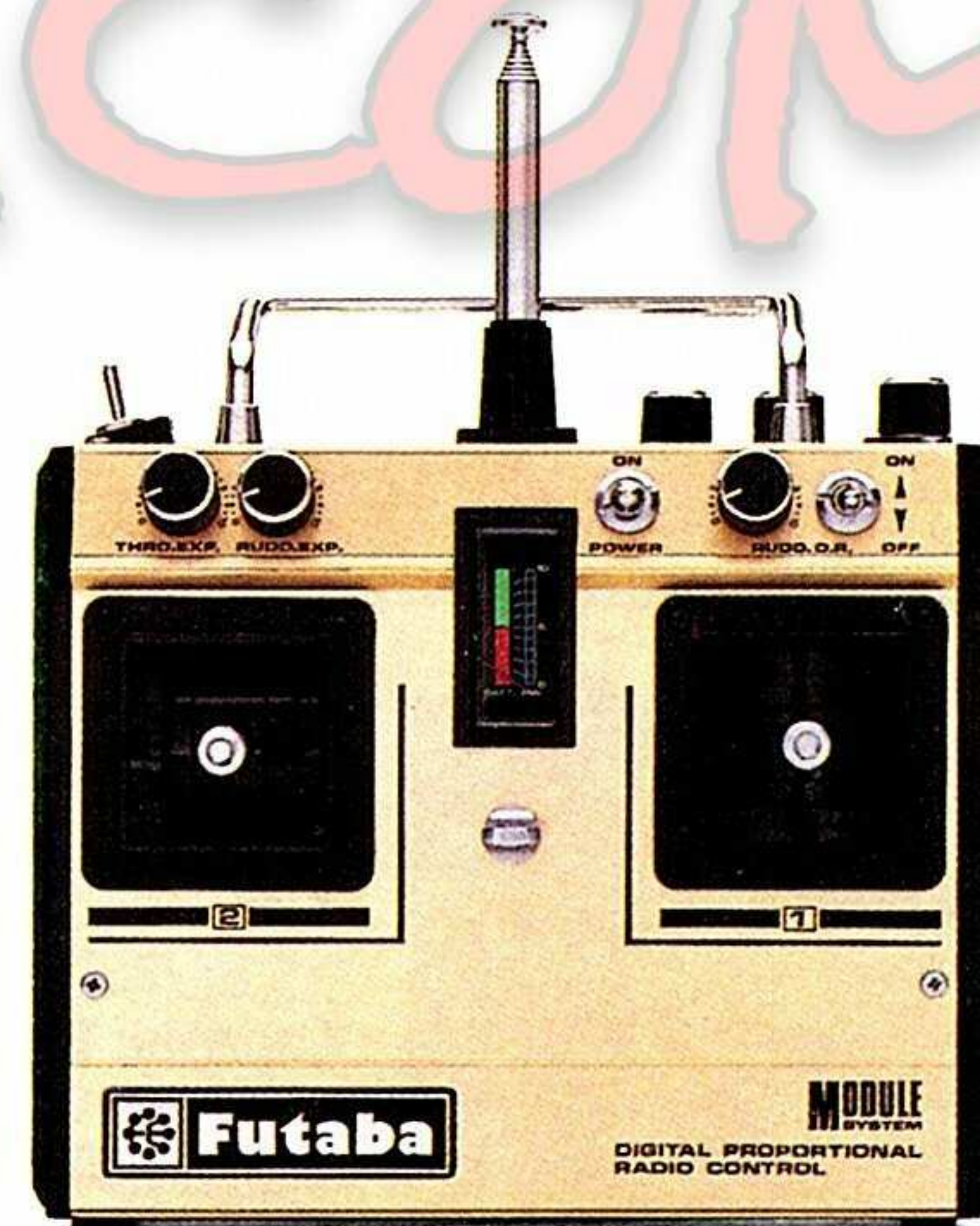
2PBKA Magnum Junior ESC/2 Channel Pistol Grip system with speed control. R102JE BEC receiver, one S148 servo, MC112B MOS/FET electronic speed control with reverse, steering dual rate, fine trim, throttle ATV, servo reverse. 27 and 75MHz. (Also available with one S132H or one S9601 servo.)



2PB Magnum Sport/2 Channel Pistol Grip system. R102JE BEC receiver, two S148 servos, servo reverse. 27 and 75MHz.



2PB Magnum Sport ESC/2 Channel Pistol Grip system with speed control. R102JE BEC receiver, one S148 servo, MC112B MOS/FET electronic speed control, servo reverse. 27 and 75MHz.



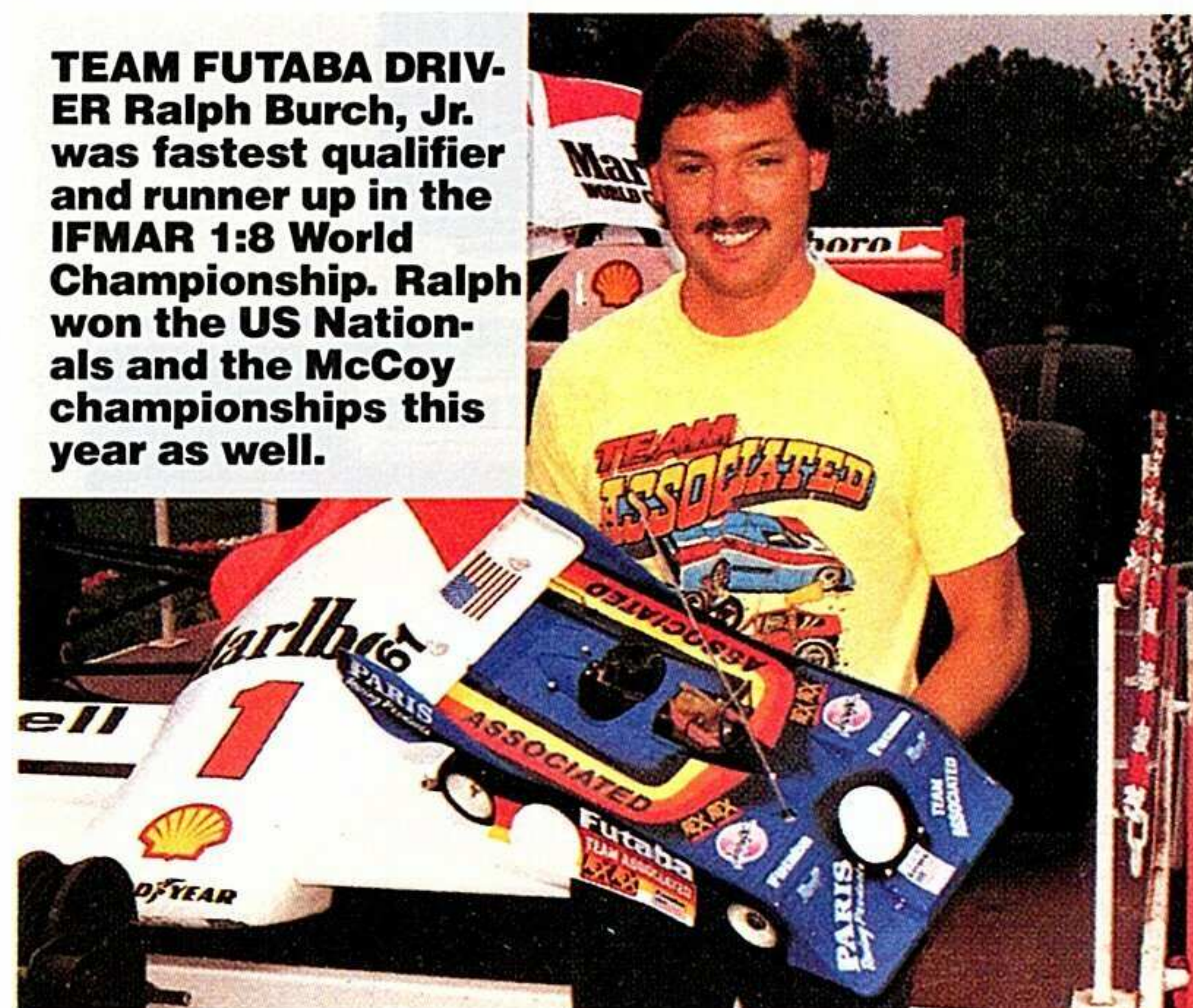
3EGX/3 Channel Dual Stick Boat system. R3L(27MHz) or R3F(75MHz) receiver, two S31S watertight servos, exponential(2), rudder dual rate, ATV, plug-in RF module, All NiCd. 27 and 75MHz.



2NBR Attack R/2 Channel Dual Stick system. R102GR BEC receiver, two S148 servos, servo reverse. 27, 75 and 72(aircraft)MHz.



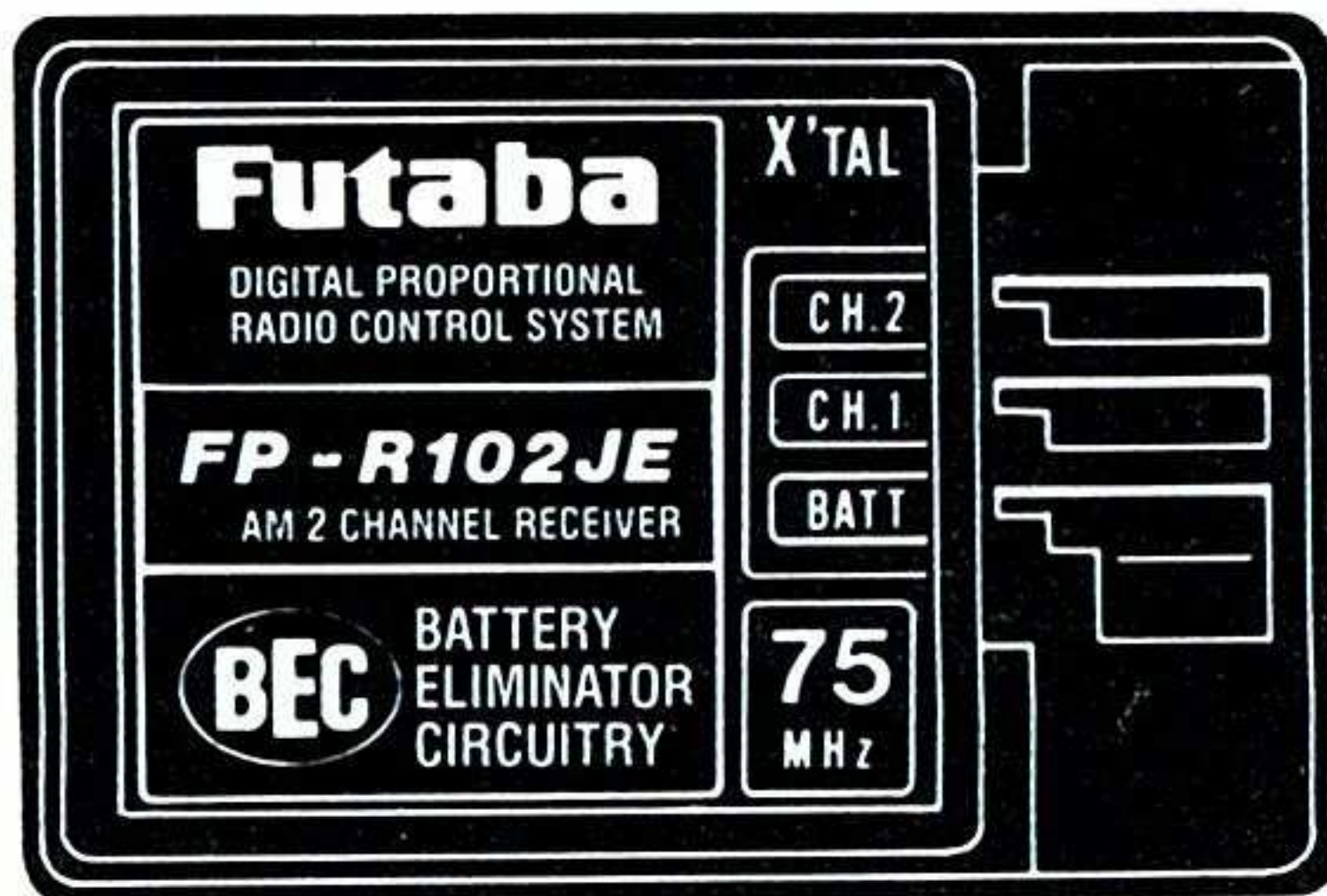
2NCS Attack/Sport/2 Channel Dual Stick system, R102JE BEC receiver, two S148 servos. 75 and 72(aircraft)MHz.



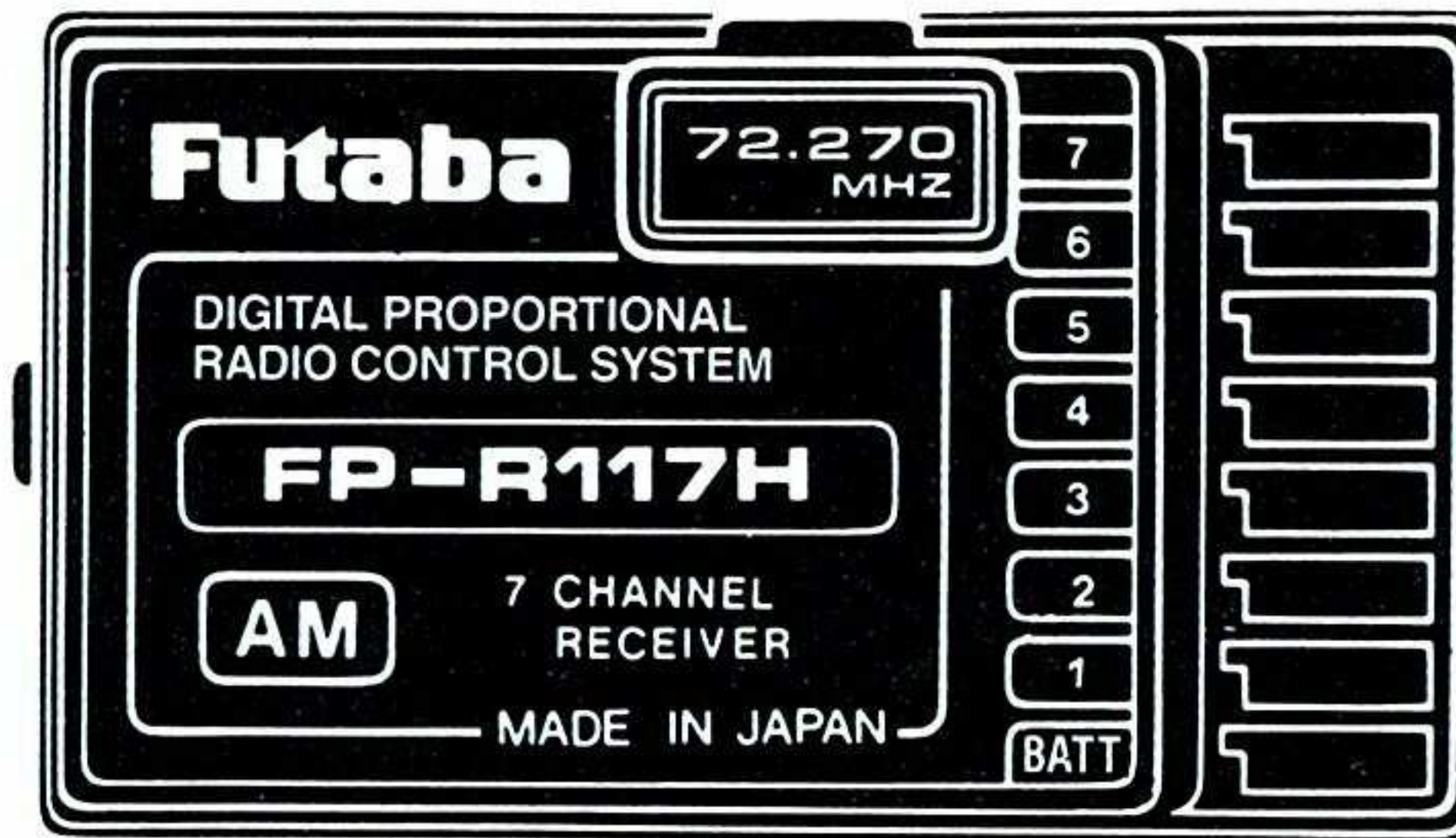
TEAM FUTABA DRIVER Ralph Burch, Jr. was fastest qualifier and runner up in the IFMAR 1:8 World Championship. Ralph won the US Nationals and the McCoy championships this year as well.

RECEIVERS

All receivers shown actual size

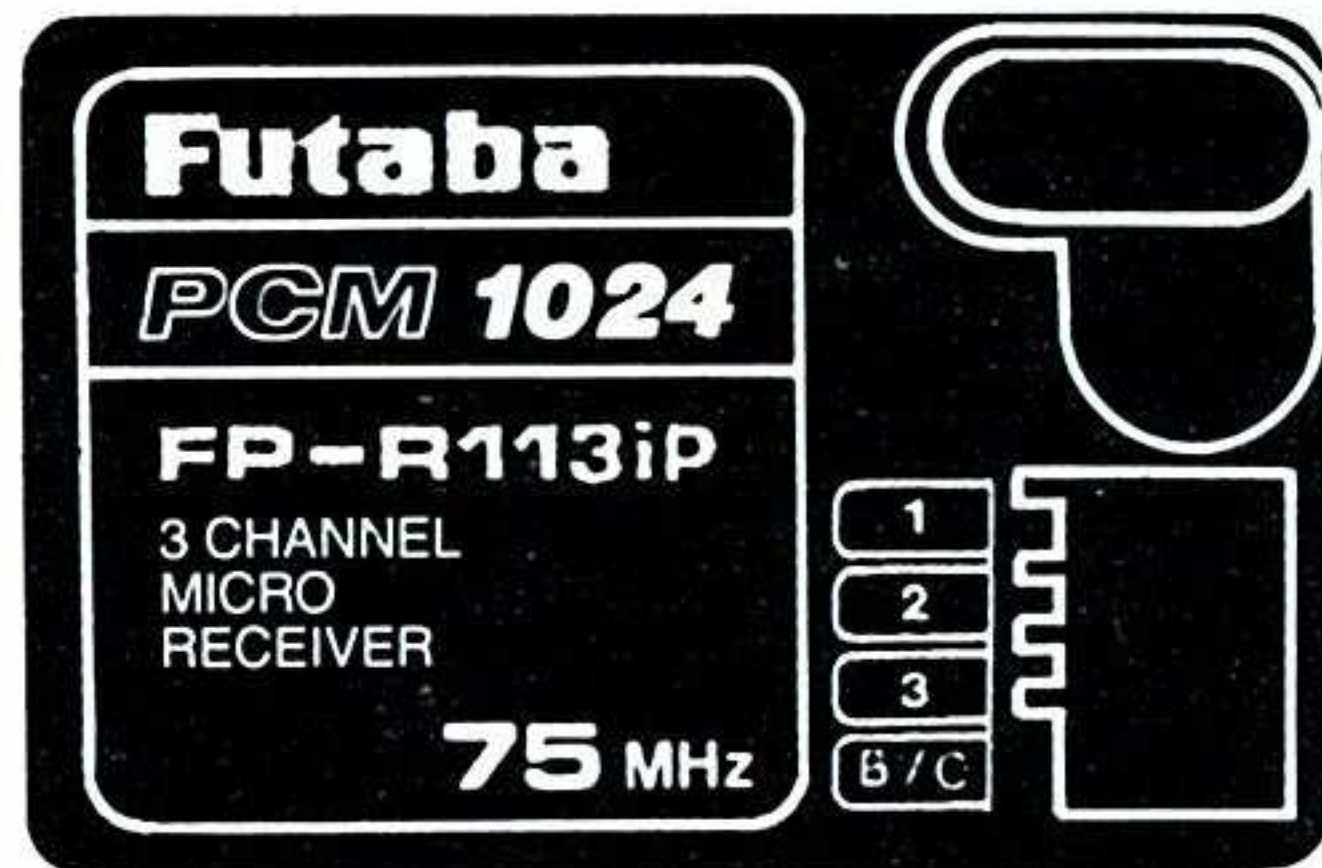


R102JE 2 Channel/BEC
1.30" x 1.86" x 0.78"
0.88 oz./27, 72 & 75MHz
\$59.95

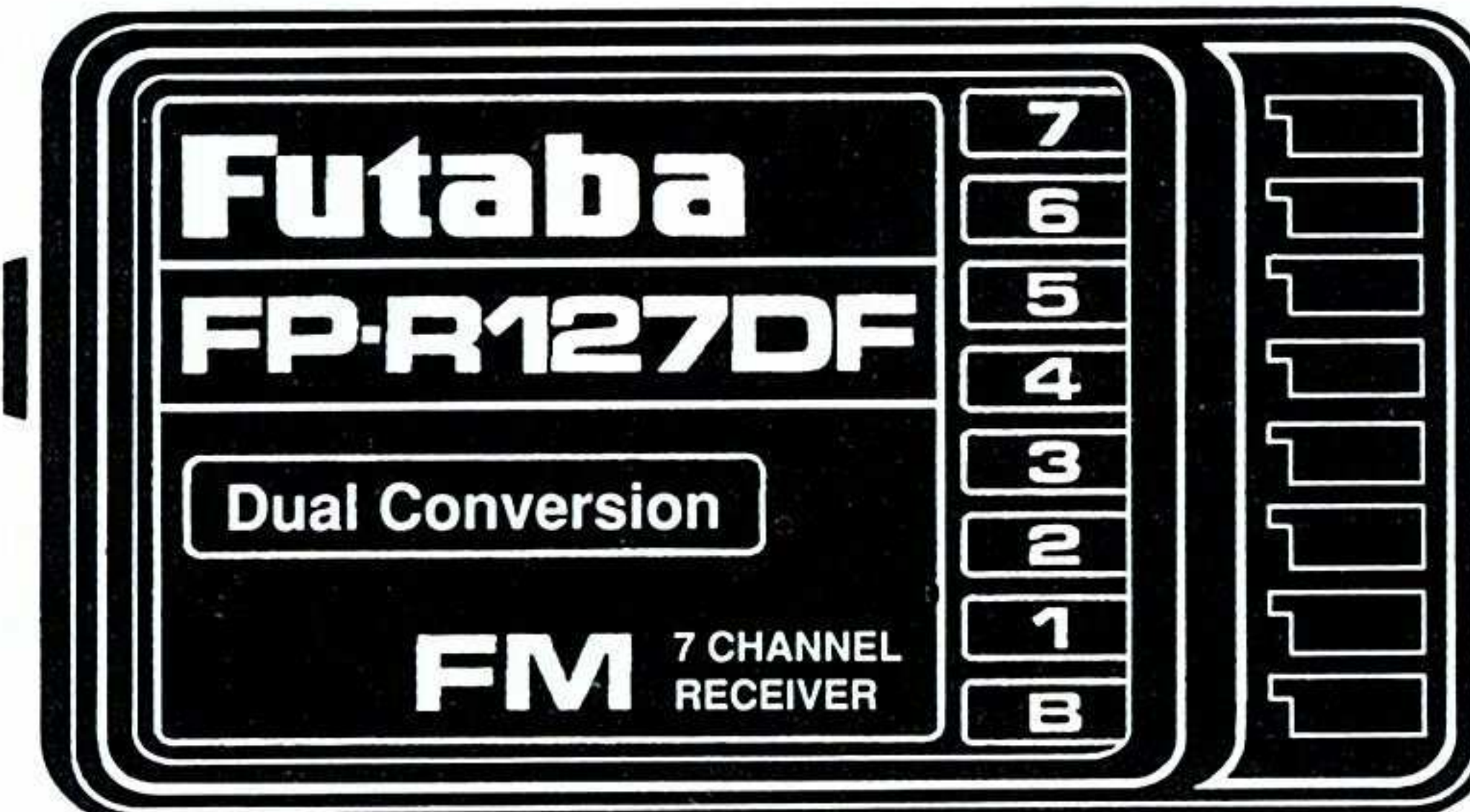


R117H 7 Channel
20KHz spacing
1.38" x 2.43" x 0.81"
1.1 oz./72 & 75MHz
\$129.95

20KHz
1991

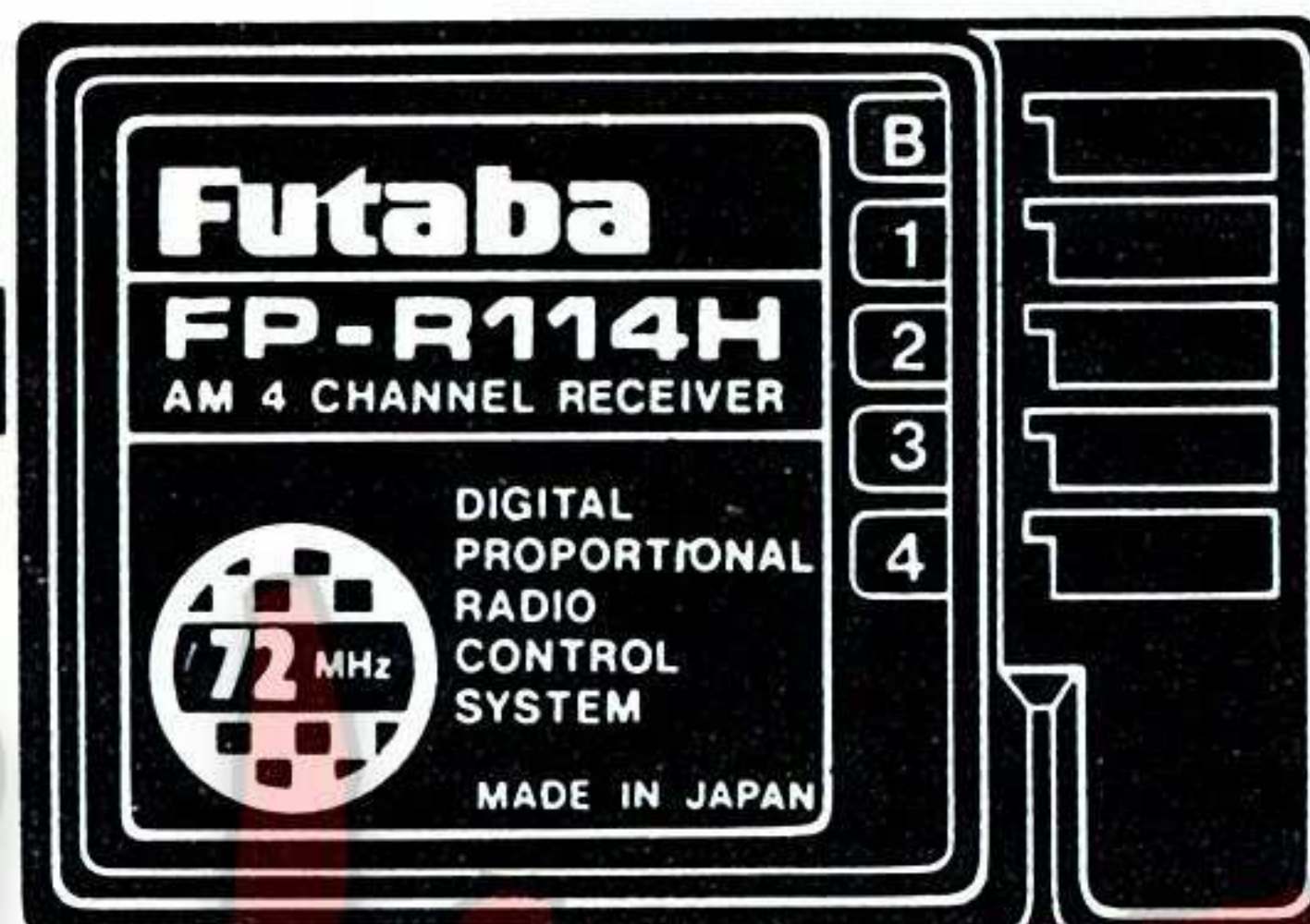


R113iP 3 Channel
Micro PCM 1024
20KHz spacing
1.13" x 1.69" x 0.63"
0.72 oz./75MHz only
\$199.95



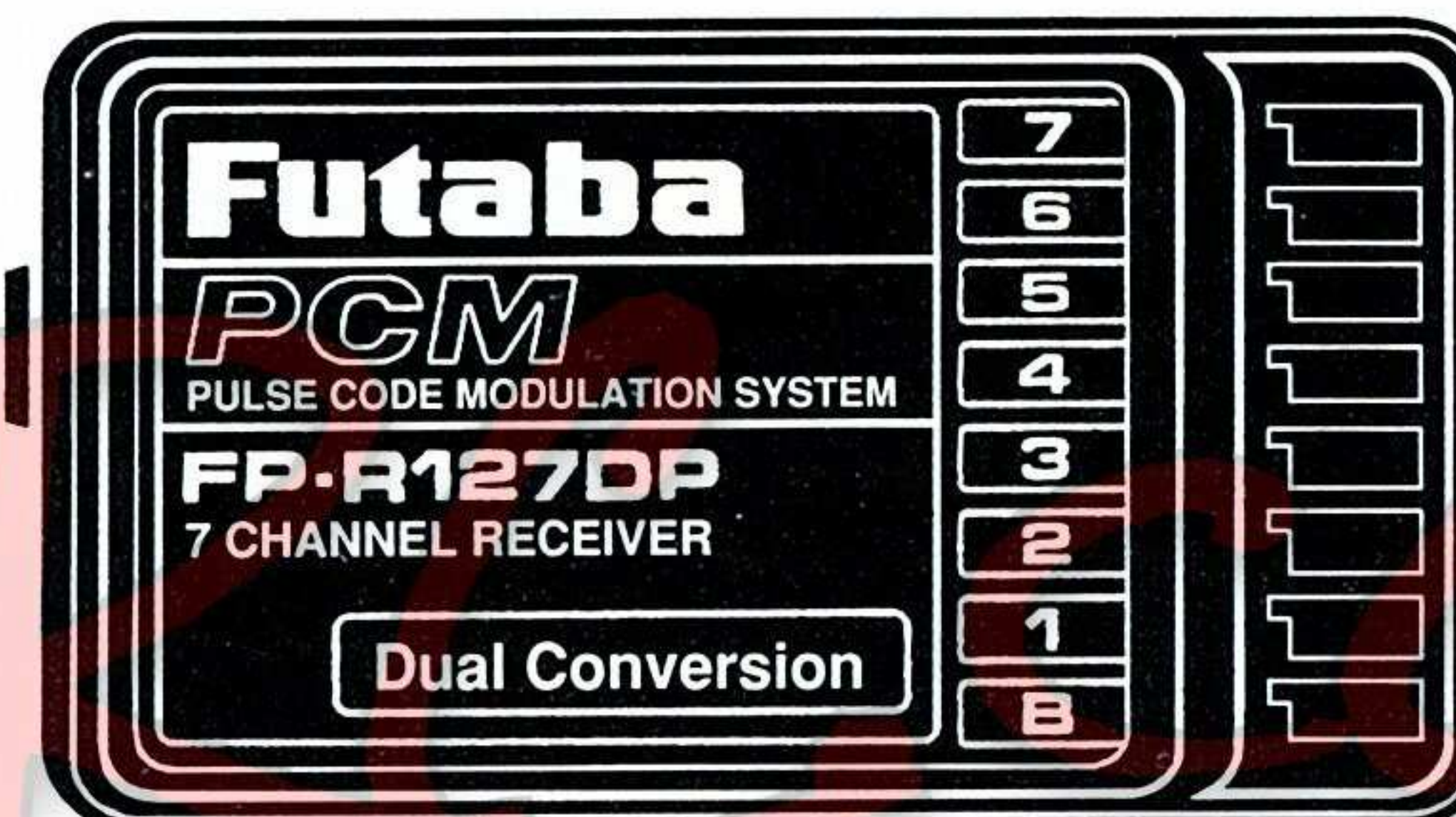
R127DF 7 Channel
FM/20KHz spacing
1.39" x 2.52" x 0.82"
1.5 oz./50 & 72MHz
TBA

20KHz
1991



R114H 4 Channel
20KHz spacing
1.31" x 1.87" x 0.81"
0.95 oz./72 & 75MHz
\$89.95

20KHz
1991

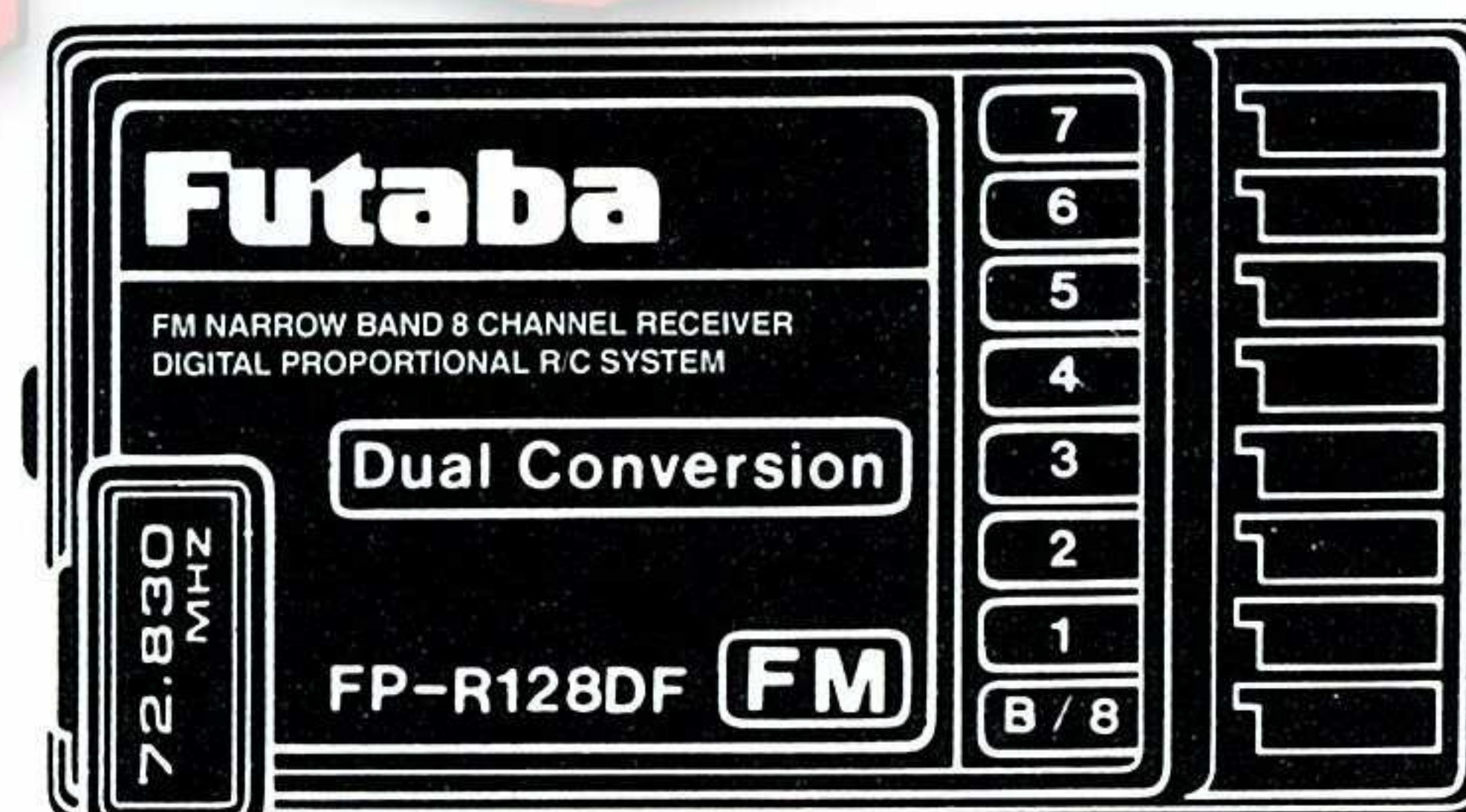


R127DP 7 Channel
PCM/20KHz spacing
1.39" x 2.52" x 0.82"
1.5 oz./50 & 72MHz
TBA

20KHz
1991
PCM



R104H 4 Channel
Micro
1.24" x 2.00" x 0.75"
1.0 oz./27, 72 and 75MHz
\$94.95



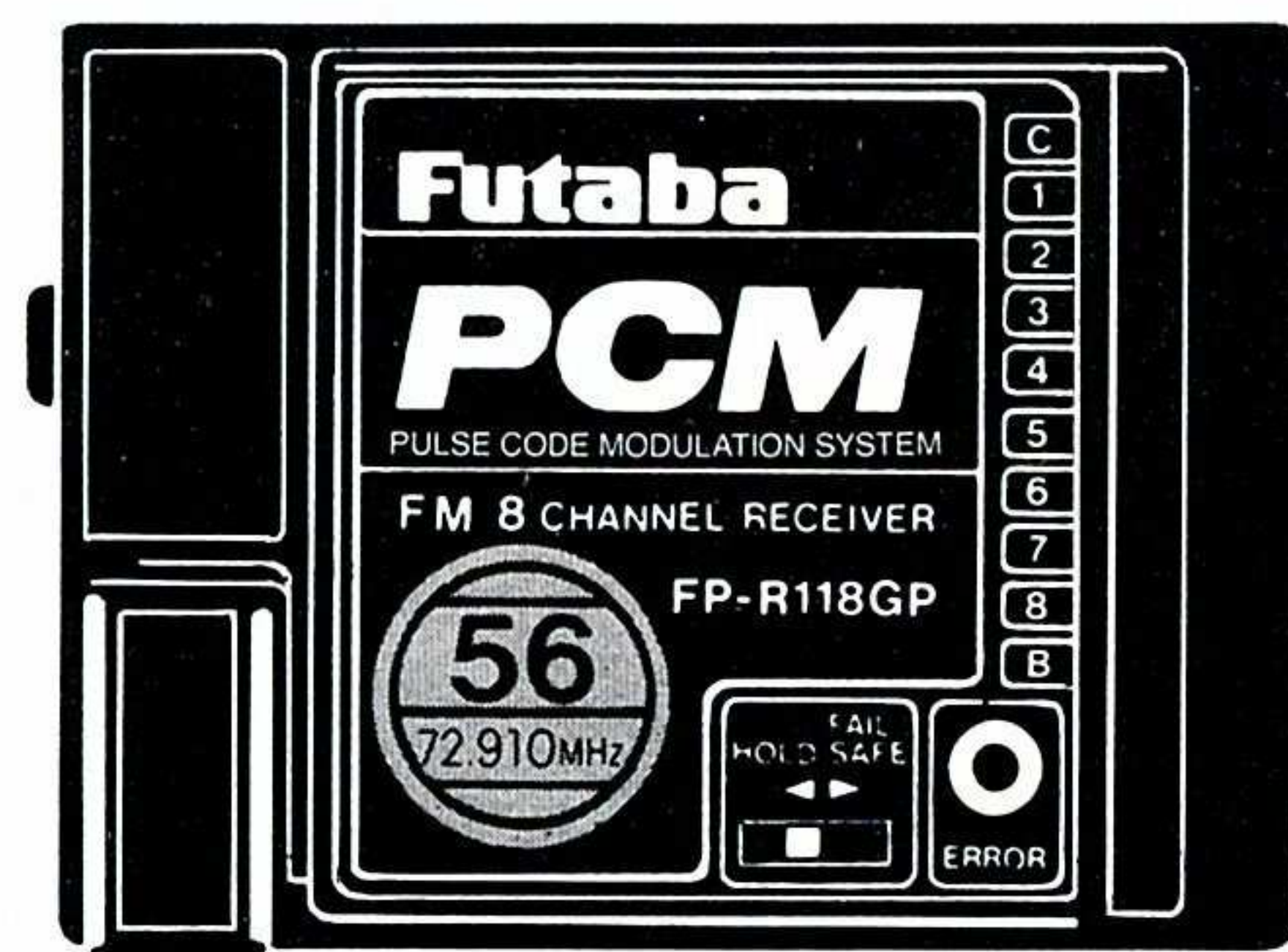
R128DF 8 Channel
FM/20KHz spacing
1.39" x 2.51" x 0.82"
1.3 oz./50 & 72MHz
\$179.95

20KHz
1991



MCR-4A 4 Channel
Integrated MOS/FET
electronic throttle
1.24" x 2.92" x 1.12"
1.5 oz./72MHz only
Capacity: 100A (continuous)
450A (surge)
Motor: 280 to 540 size
\$159.95

20KHz
1991

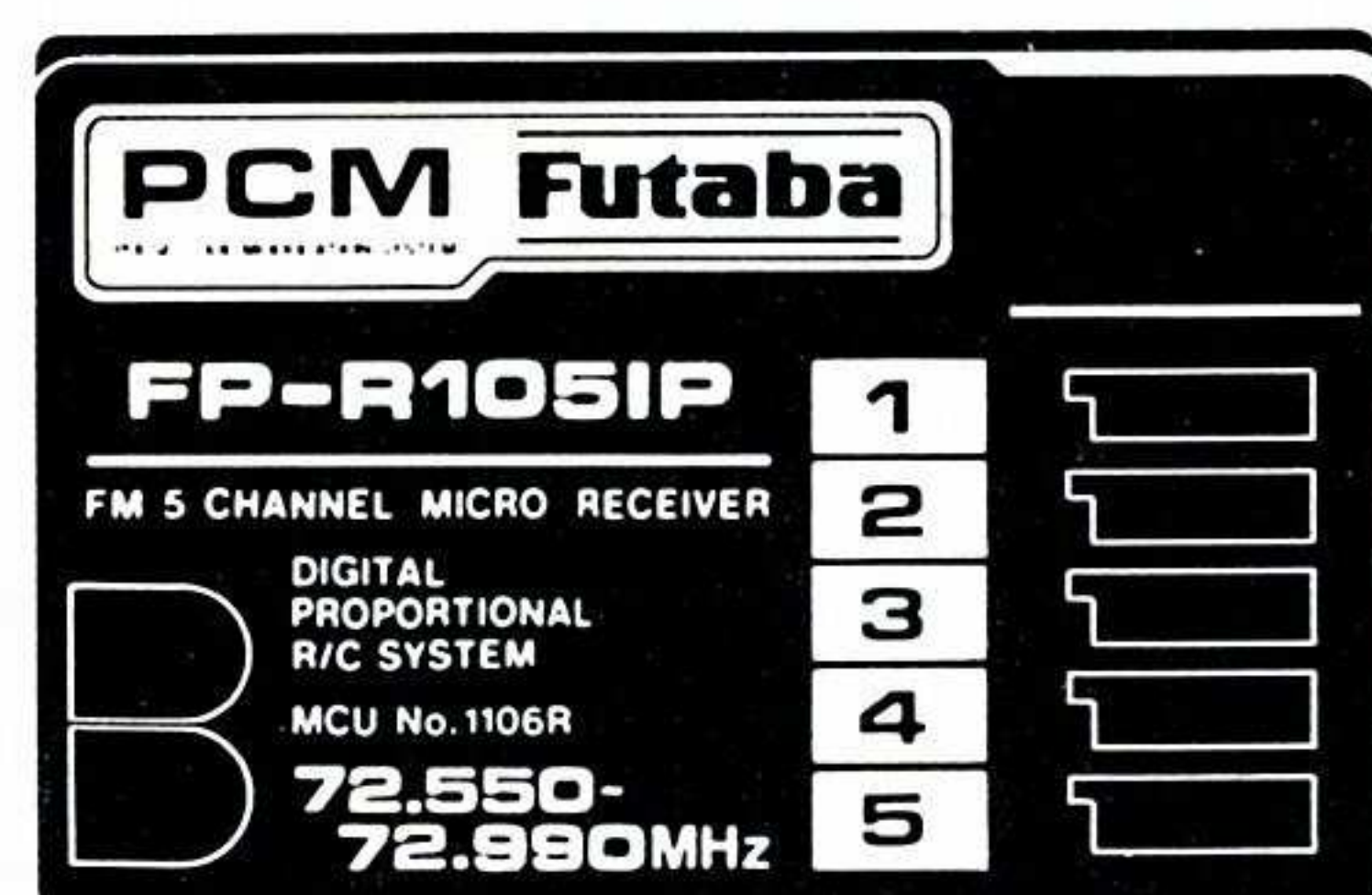


R118GP 8 Channel
PCM/20KHz spacing
1.65" x 2.23" x 0.94"
1.9 oz./50, 53 and 72MHz
FM/PCM
\$199.95

PCM

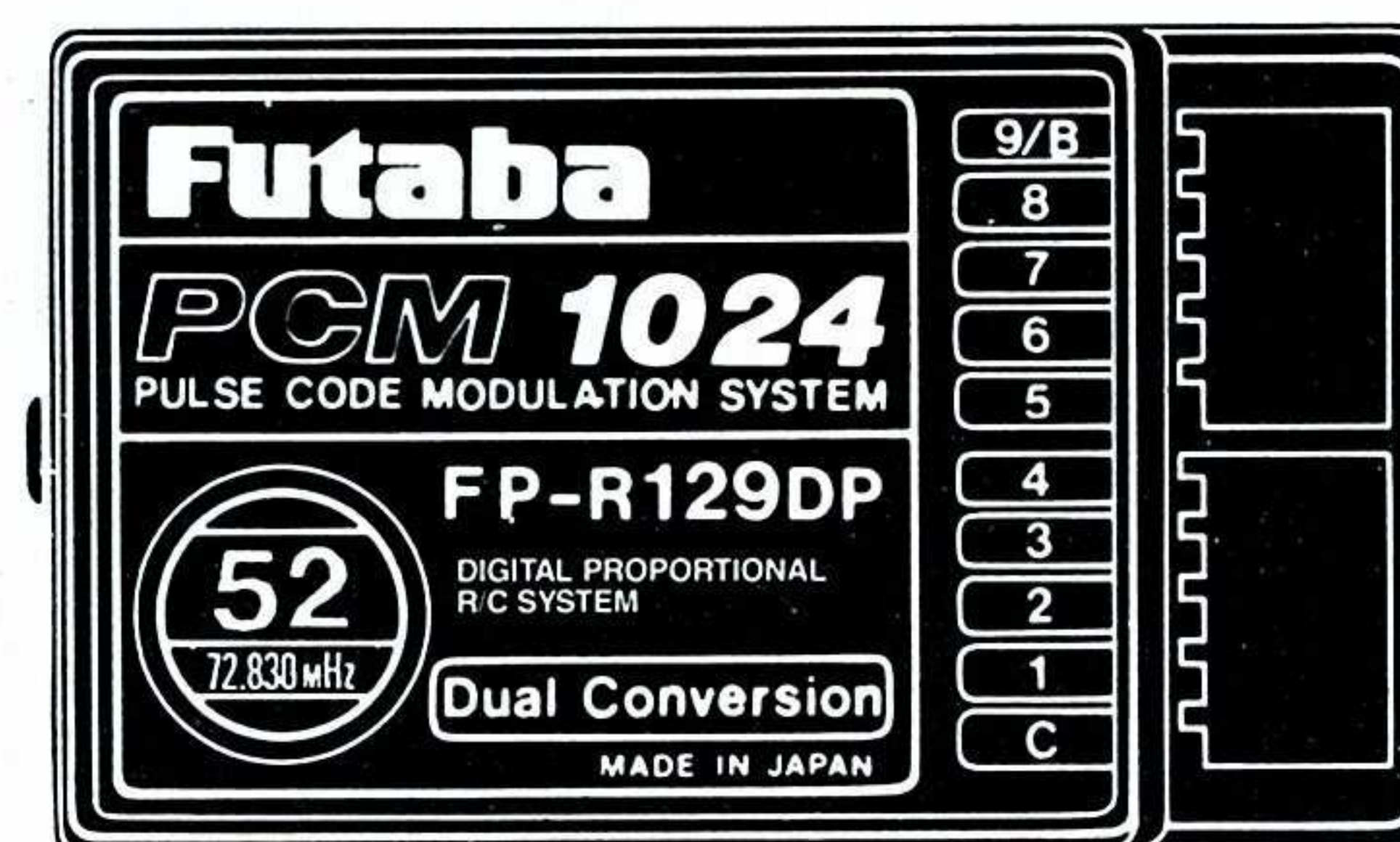
R116GP 6 Channel
PCM/20KHz spacing
\$179.95

PCM



R105iP 5 Channel/PCM
1.31" x 1.97" x 0.81"
1.19 oz./50, 53 and 72 MHz
FM/PCM
\$189.95

20KHz
1991
PCM



R129DP 9 Channel
Dual Conversion
PCM 1024
20KHz spacing
1.48" x 2.48" x 0.97"
1.5 oz./50 & 72MHz
\$259.95

20KHz
1991
PCM

R128DP 8 Channel
Dual Conversion
PCM/20KHz Spacing
\$249.95

PCM

ELECTRONIC SPEED CONTROLS



MC111B (MC11B)

Competition: MOS/FET electronic speed control. Capacity: 7.2v (6-cell) to 8.4v (7-cell)/130A (continuous), 500A (surge). Variable braking with reverse. Includes LED check circuits, motor connectors. MC111B uses J-type connector, MC11B uses 3-pin connector. VDR: .008 ohm. 1.81" x 1.59" x 0.78"/2.16 oz. \$109.95

MC9T (MC109T) FET (7)

Electronic Speed Control Competition/Proportional forward with brake and check circuits. Capacity: 6-9.6v/150A (continuous) 450 (surge) Voltage drop resistance: .007 ohm 1.17" x 1.59" x 0.61"/1.0 oz. \$159.95

MC10T (MC110T) FET (6)

Electronic Speed Control Compact/Proportional forward with brake. Capacity: 6-9.6v/75A (continuous) 300A (surge) Voltage drop resistance: .010 ohm 1.27" x 1.46" x 0.55"/0.9 oz. \$129.95

MC112B (MC12B)

Competition: MOS/FET electronic speed control. Capacity: 7.2v (6-cell) to 8.4v (7-cell)/100A (continuous), 400A (surge). Braking and one-speed reverse. Includes LED check circuits, motor connectors. MC112B uses J-type connector, MC12B uses 3-pin connector. VDR: .009 ohm. \$79.95

MC4-20 Speed control system

Proportional forward and reverse Capacity: 24v/20A Includes: MC4 controller, MC4-F20 filter and MC4-P20 driver module. \$119.95

MC4-10 Speed control system

Proportional forward and reverse Capacity: 24v/10A Includes: MC4 controller, MC4-F10 filter and MC4-P10 driver module. \$99.95

MC4 Controller unit module

(requires filter and driver to operate) 1.34" x 2.06" x 0.73"/0.8 oz. \$39.95

MC116

Competition Electronic Speed Control Proportional forward with brake and check circuits Built-in receiver power supply FET Rating: 210A (Continuous) 1260A (Surge) Voltage Drop Resistance: .0035 ohm 1.43" x 1.56" x 0.62"/1.4 oz. \$159.95

MC4-F10 10A noise filter

2.00" x 1.06" x 0.50"/0.35 oz. \$7.95

MC4-F20 20A noise filter

2.00" x 1.06" x 0.50"/0.50"/0.35 oz. \$11.95

MC4P10 10A power driver module

2.64" x 2.83" x 1.63" 5.5 oz. \$79.95

MC4-P20 20A power driver module

2.81" x 3.12" x 1.62" 6.6 oz. \$99.95

FREQUENCY MODULES

TD-27AM

3EGX/27MHz AM \$44.95

TD-75AM

3EGX/75MHz AM \$44.95

TG-27AM

3PG Magnum/27MHz AM \$44.95

TG-75AM

3PG Magnum/75MHz AM \$44.95

TF-50FM

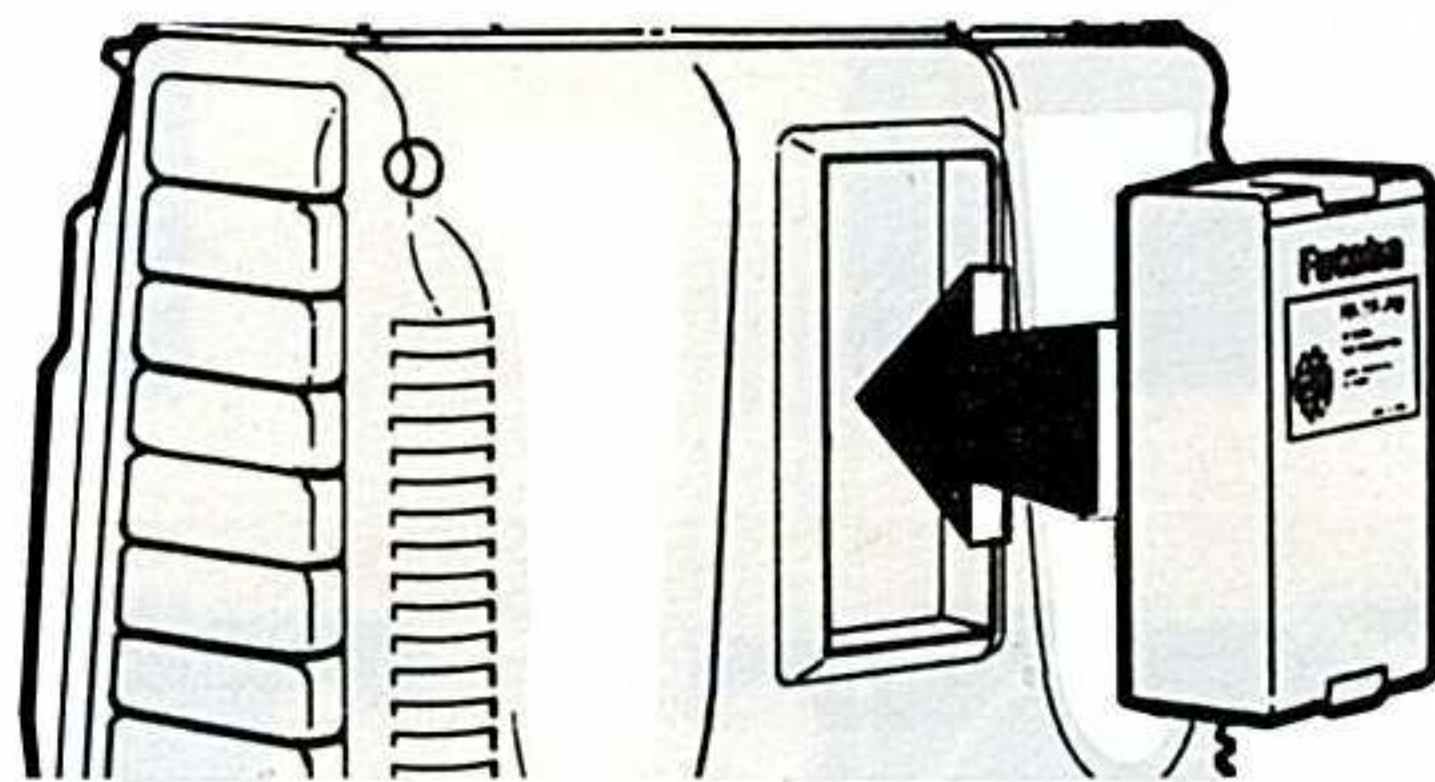
PCM and G-Series/50MHz FM \$59.95

TF-53FM

PCM and G-Series/53MHz FM \$59.95

TF-72AM

G-Series/72MHz AM \$44.95



TF-72FM

PCM and G-Series/72MHz FM \$59.95

TF-75AM

G-Series/75MHz AM \$44.95

TK-50PCM

9VA and 9VH/72MHz FM \$69.95

TL-72PCM

9VA and 9VH/72MHz FM \$69.95

TL-75PCM

3PB Magnum/75MHz FM \$69.95

TP-72AM

5UA/72MHz AM \$44.95

TP-75AM

5UA/75MHz AM \$44.95

TP-50FM

5UAF, 5UAP, 7UAF, 7UAP, 7UHF, 7UHP/50MHz FM \$64.95

TP-72FM

5UAF, 5UAP, 7UAF, 7UAP, 7UHF, 7UHP/72MHz FM \$64.95

ACCESSORIES



9 Ch. Case
Lightweight alloy field case \$79.95

DT-1 Digital tachotimer 4-function, LCD readout combination flight timer/tachometer \$89.95

Curl Cord 3PG Magnum remote NiCd extension cord \$16.95

FC-1 Audible flight checker Monitors receiver battery/low voltage warning. Aids model location/triggers signal when transmitter is switched off. Body: 1.36" x 2.11" x 0.77" 0.78 oz. Buzzer: 1.02" x 1.02" x 0.77" 0.67 oz. \$39.95

M-TC-AM AM Trainer cord \$14.95

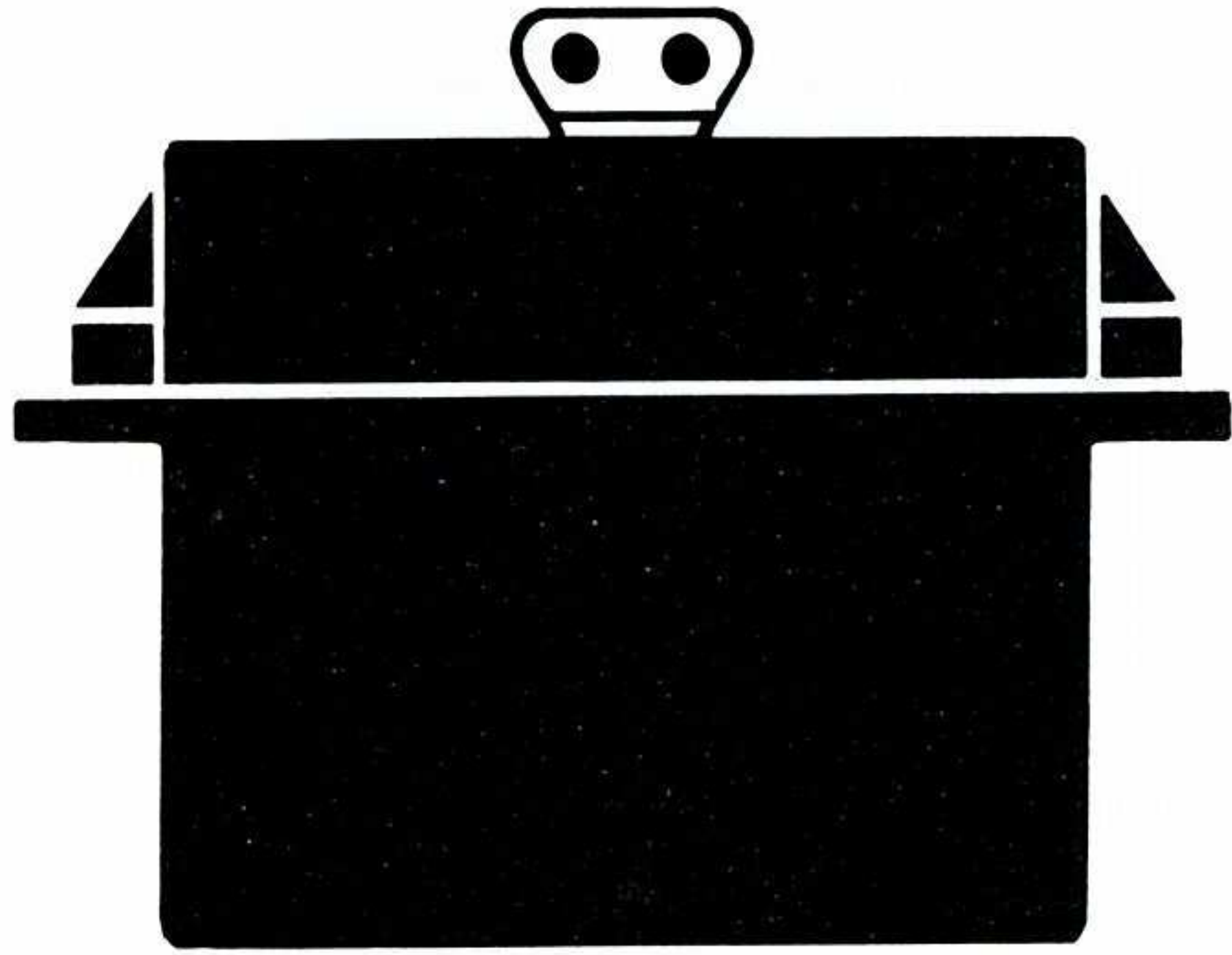
M-TC-FM G-Series FM trainer cord \$14.95

TSC-1 PCM Tacho-sensor \$15.95

SERVOS

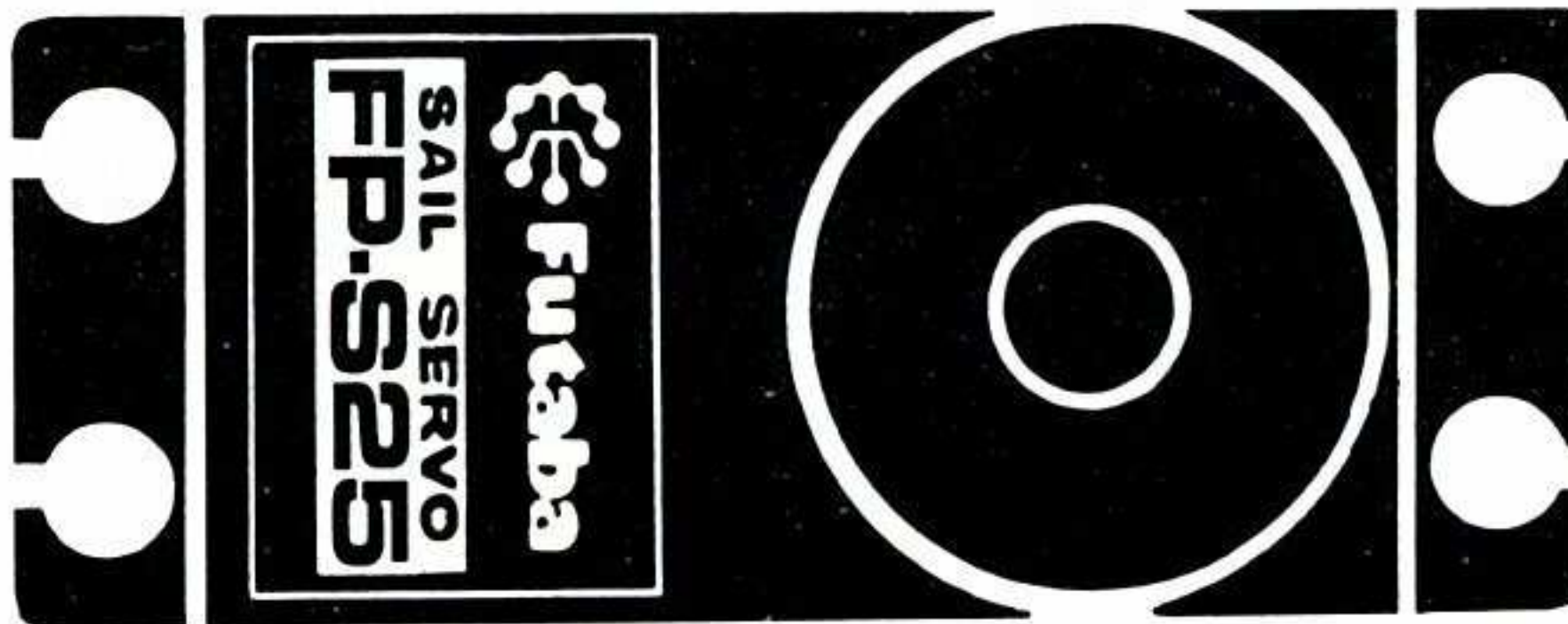
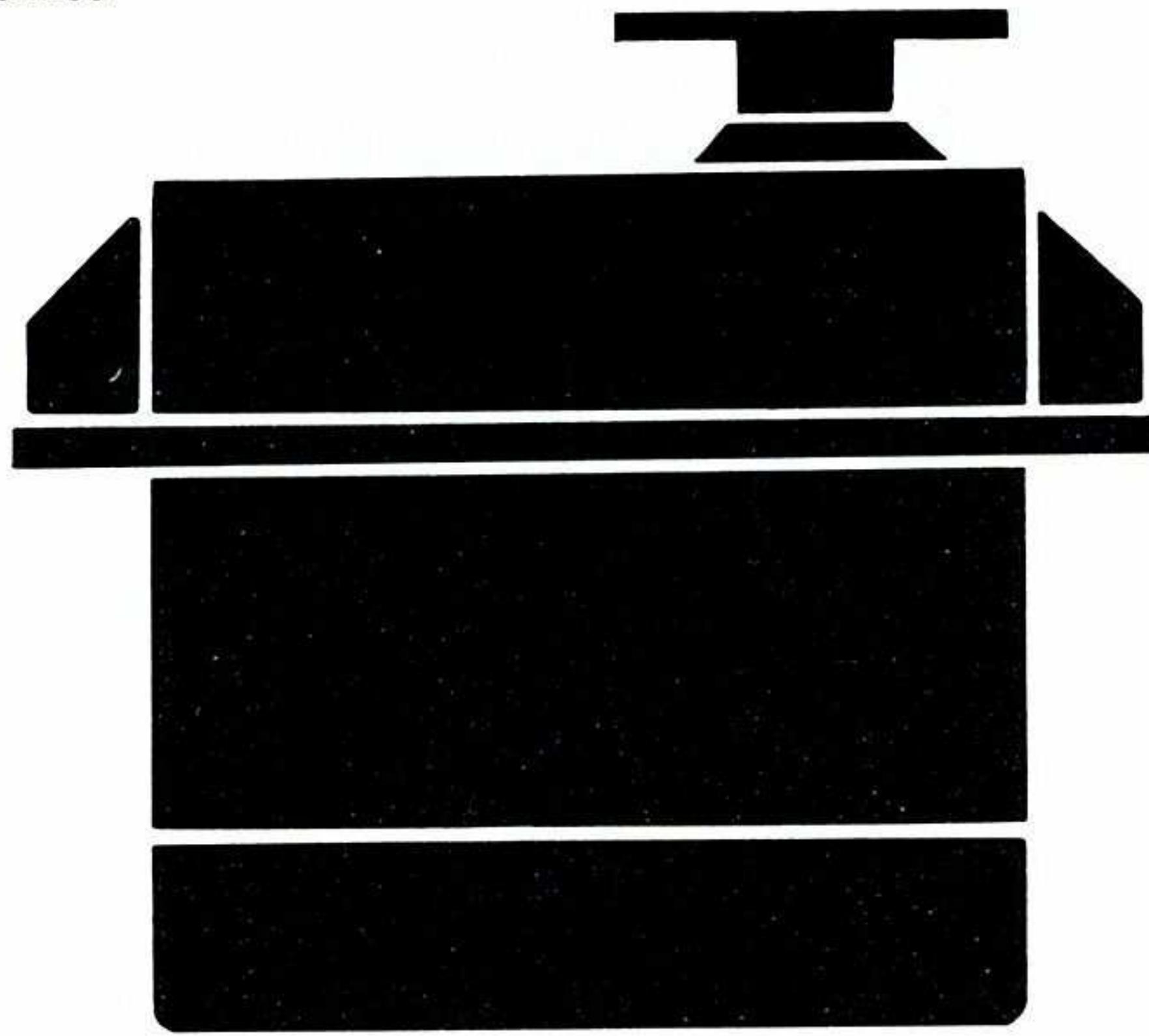
All servos shown actual size

NOTE: "S" preceding servo number designates standard Futaba 3-pin mini connector and 1320us neutral. "S100" designates version with J-connectors and 1520us neutral.



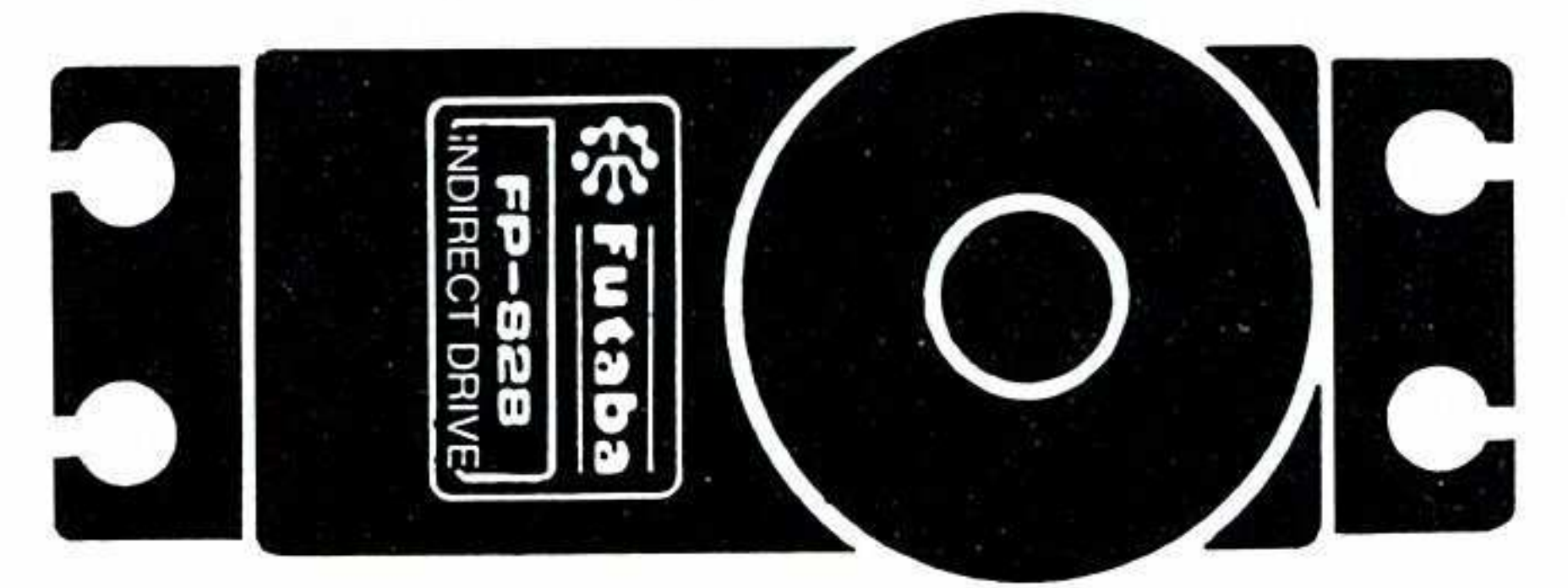
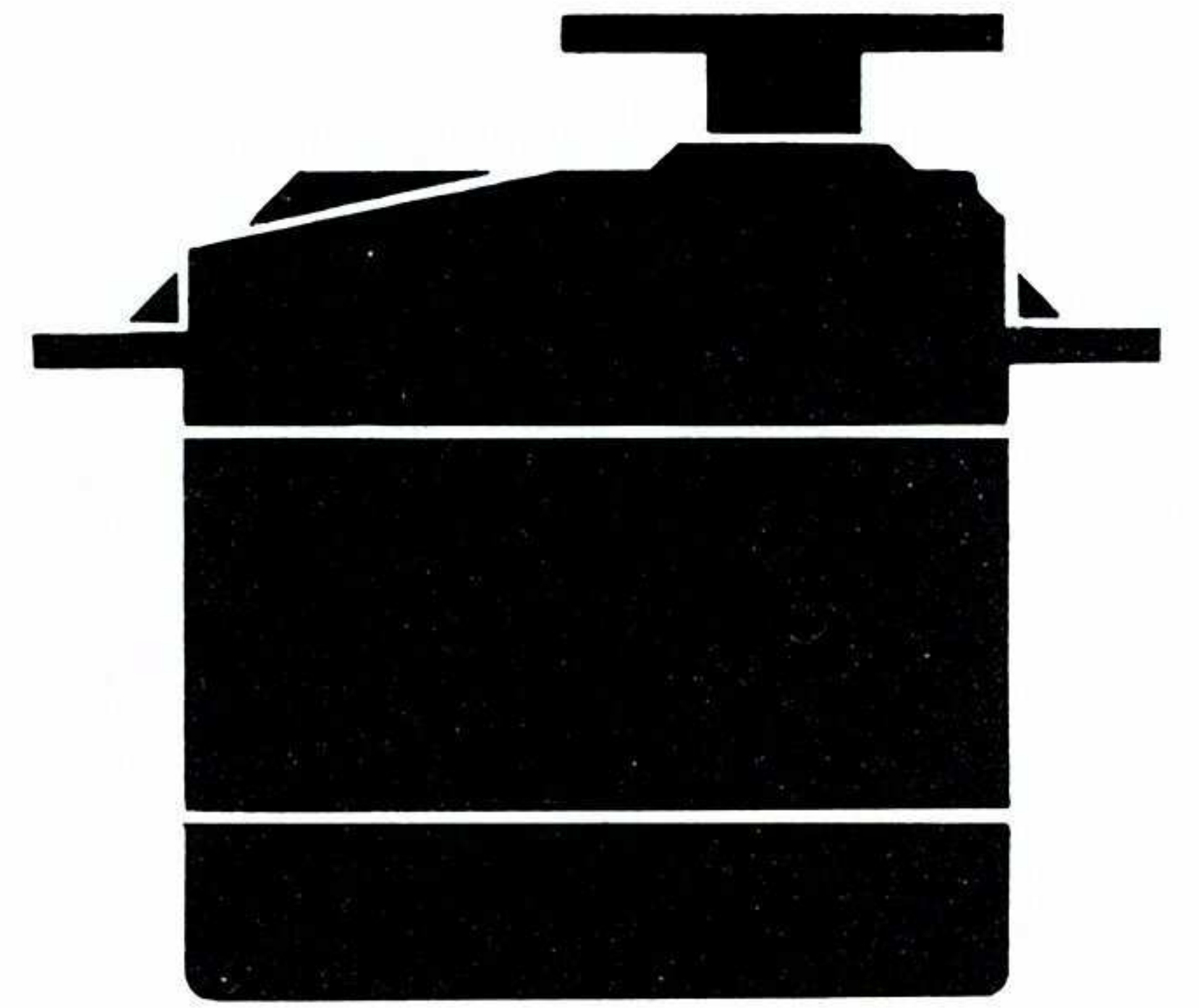
S11 Linear output servo
\$54.95 0.75" x 1.75" x 1.50"
1.4 oz./25.1 oz./in.

S110(S10) Heavy duty sail winch
\$129.95 1.50" x 2.93" x 3.50"
(not shown) 8.8 oz./122.3 oz./in.
Stroke: 21.8"/3.8 sec.

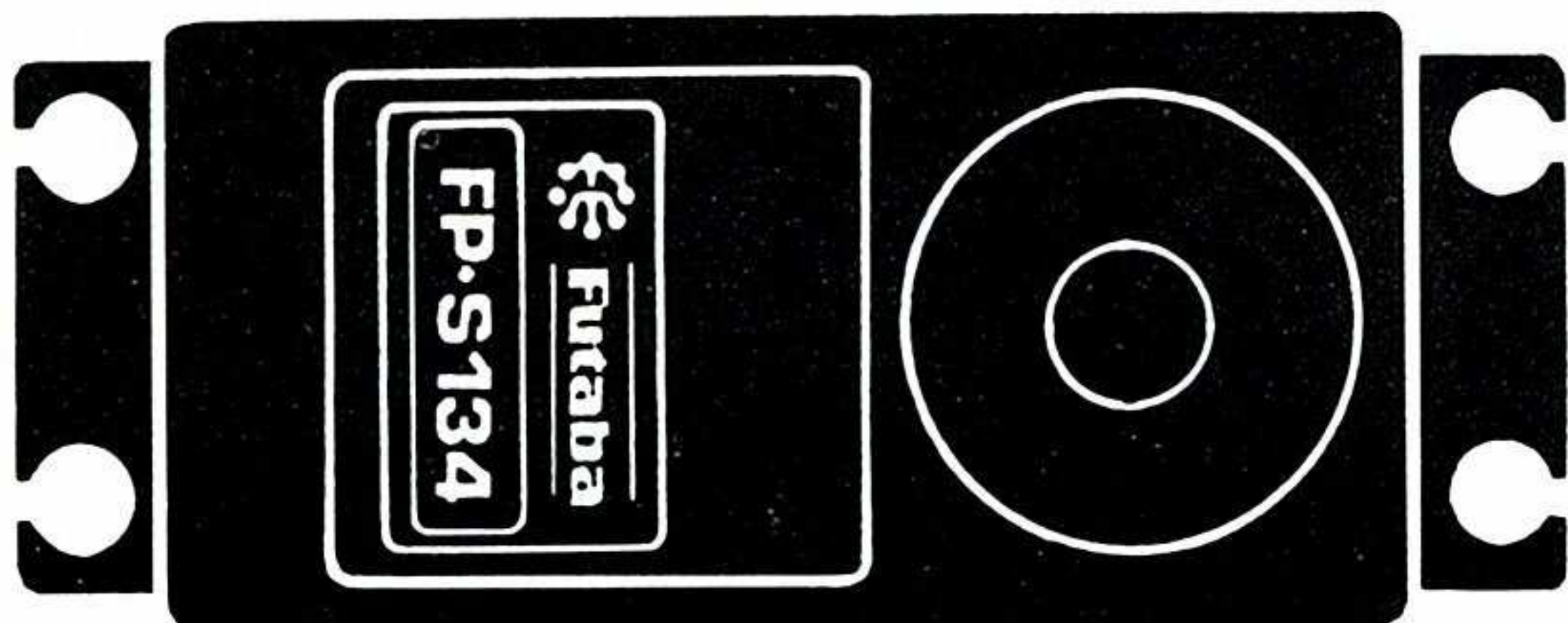
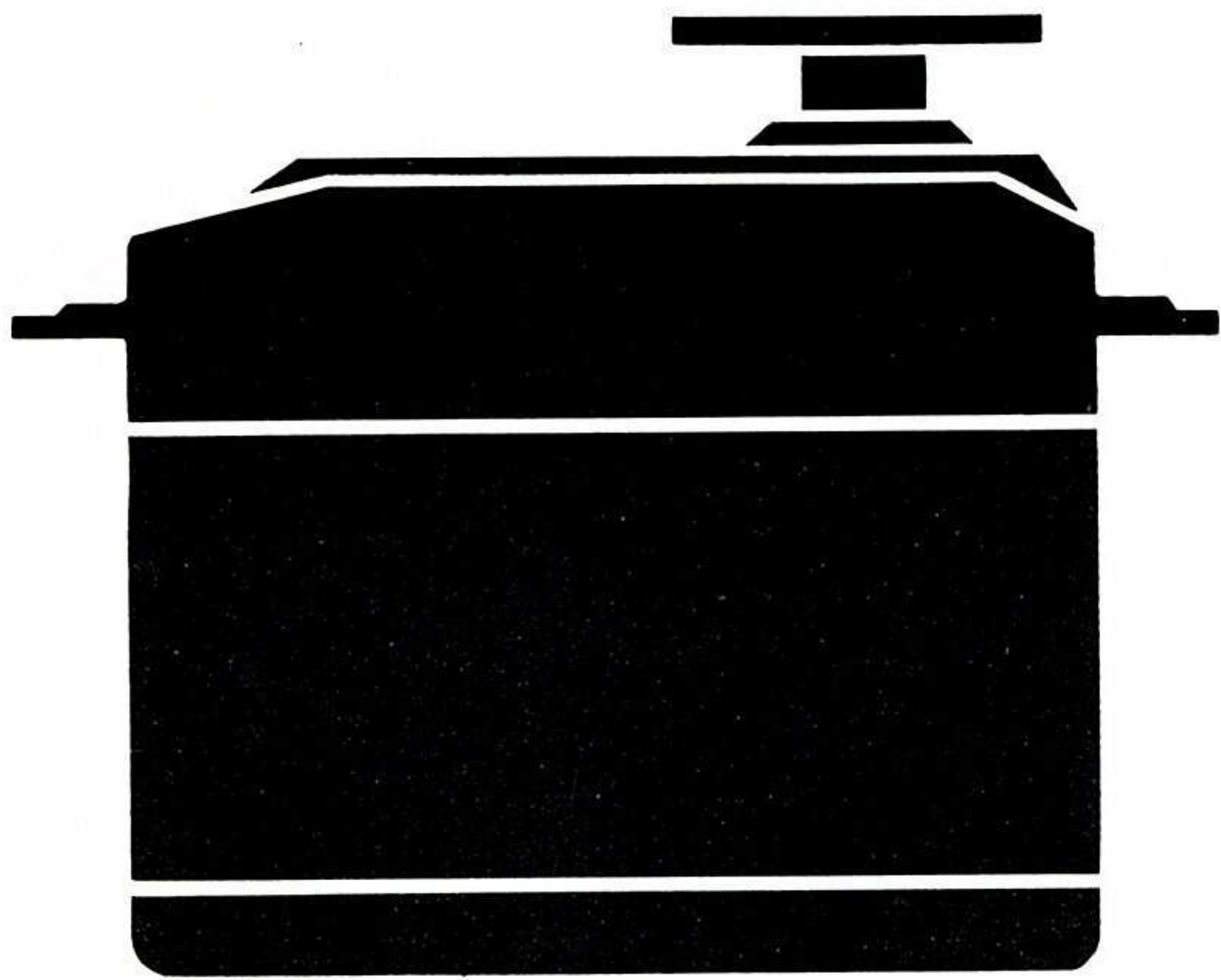


S125 (S25) Arm type sail control servo
\$59.95 140 degrees (max.)
0.88" x 1.75" x 1.69"
2.3 oz./129.3 oz./in.
0.62 sec./60 degrees
140 degree/arm type

S114(S14) High torque servo
\$129.95 1.50" x 2.93" x 3.50"
(not shown) 8.8 oz./167 oz./in.
0.29 sec./60 degrees

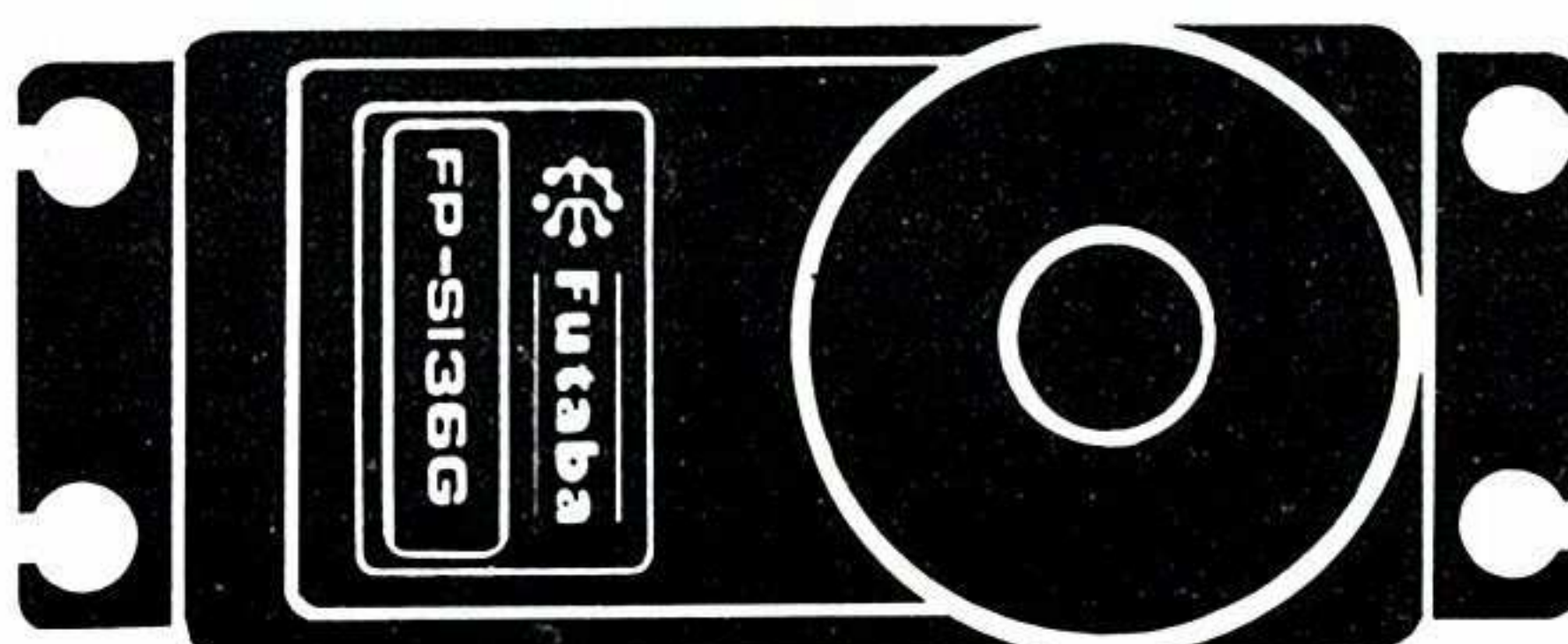
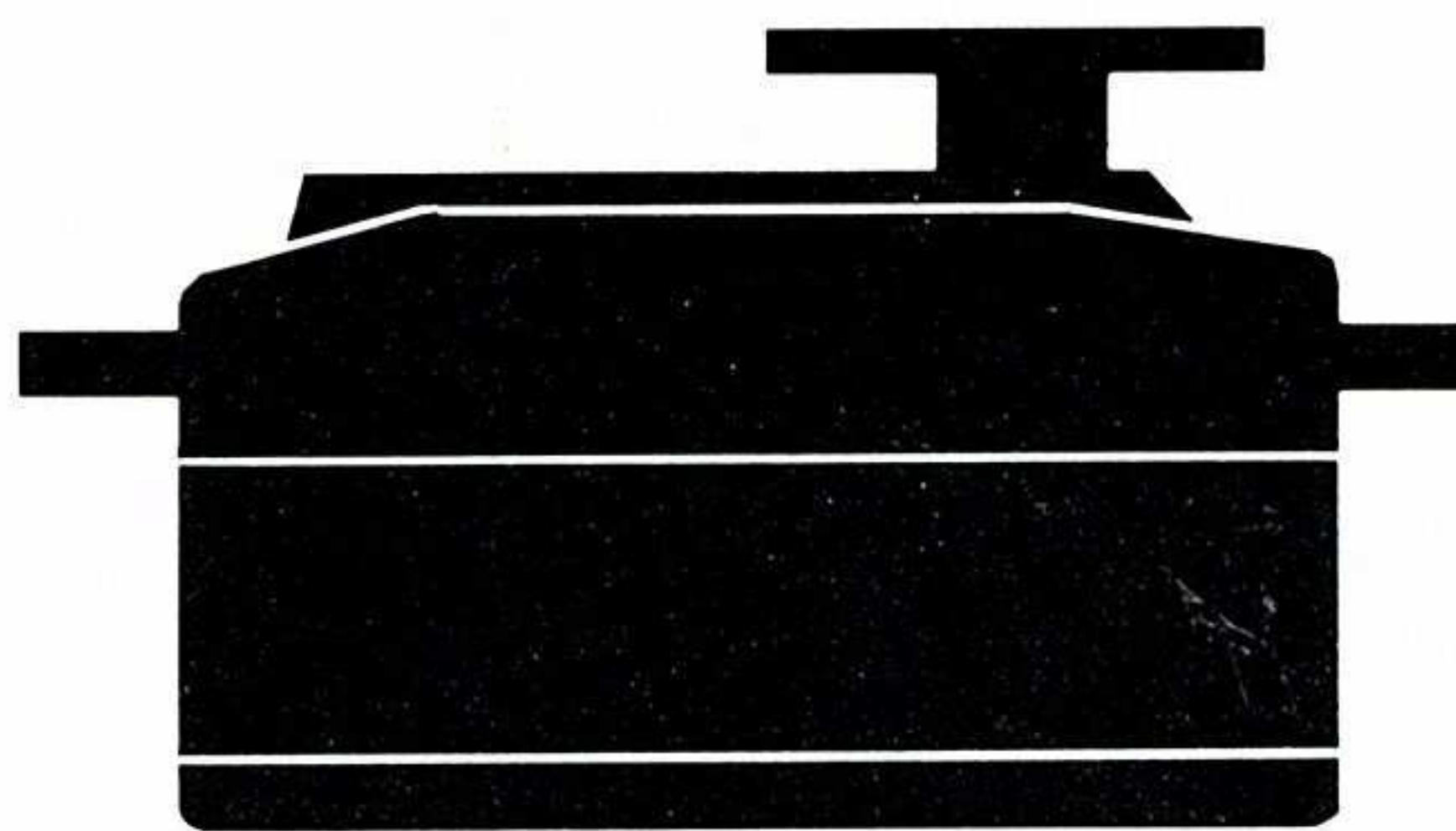


S128 (S28/S28L) Standard servo
\$39.95 0.75" x 1.56" x 1.56"
1.8 oz./48.7 oz./in.
0.24 sec./60 degrees

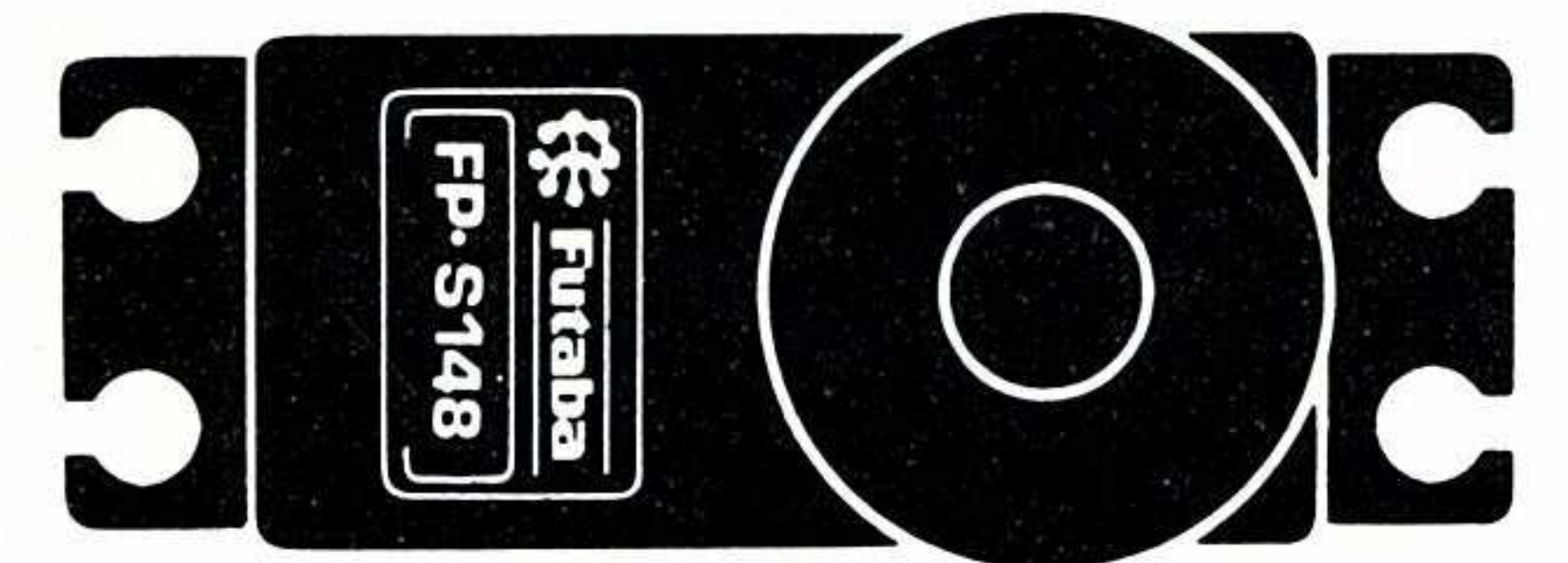
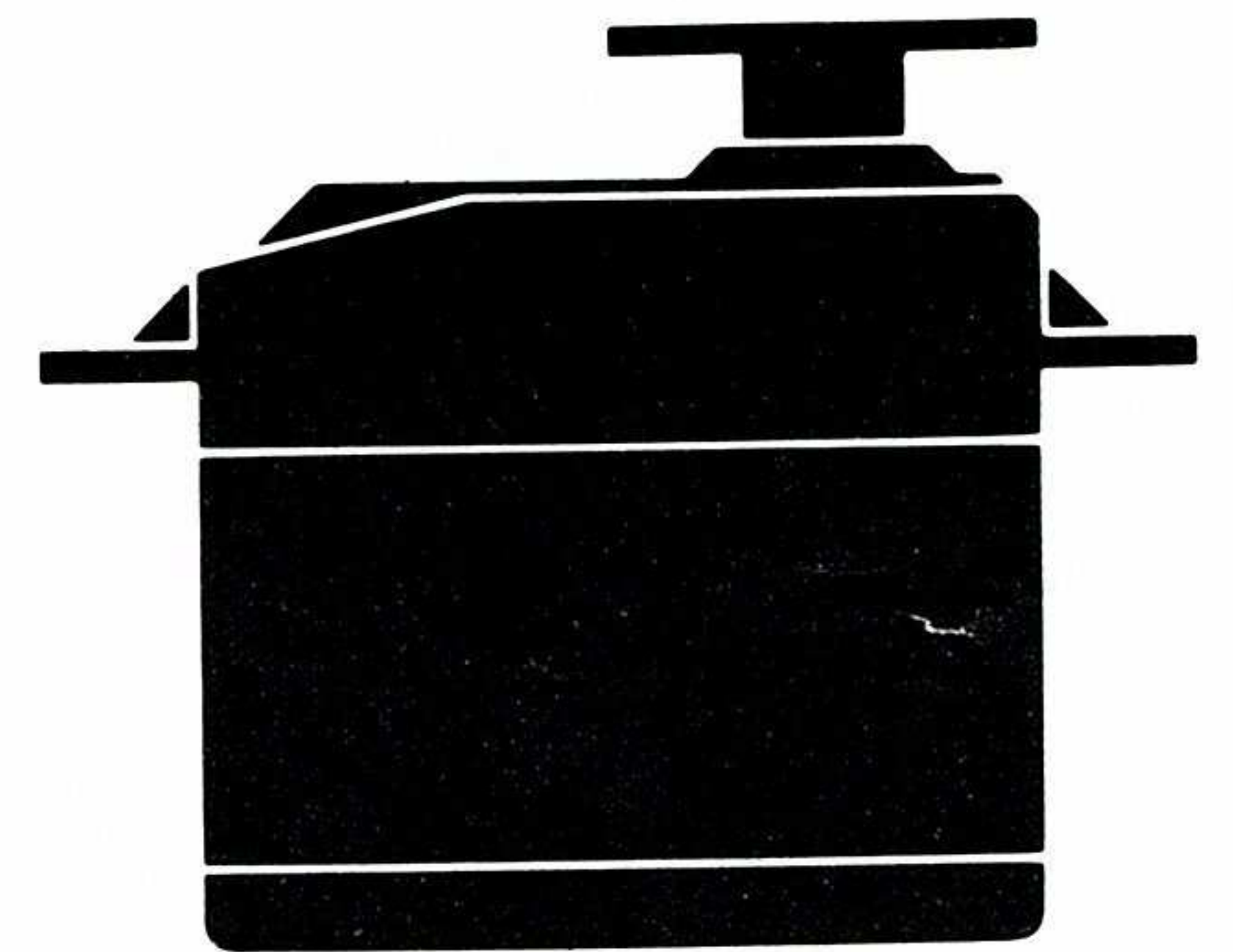


S134 Quarter scale servo
\$64.95 1.14" x 2.32" x 1.97"
2.7 oz./112.6 oz./in.
0.22 sec./60 degrees

S134G (S34G) Quarter scale retract
\$74.95 1.14" x 2.32" x 1.97"
2.8 oz./173.8 oz./in.
0.33 sec./60 degrees

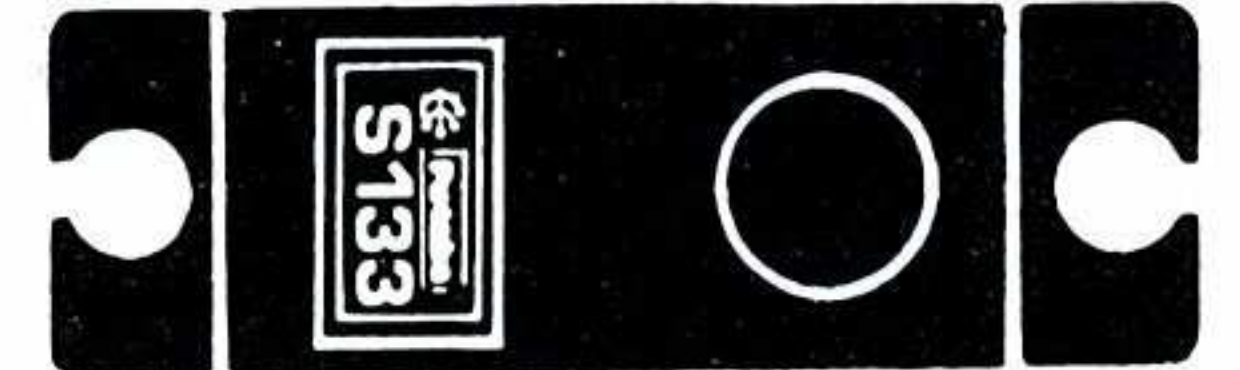
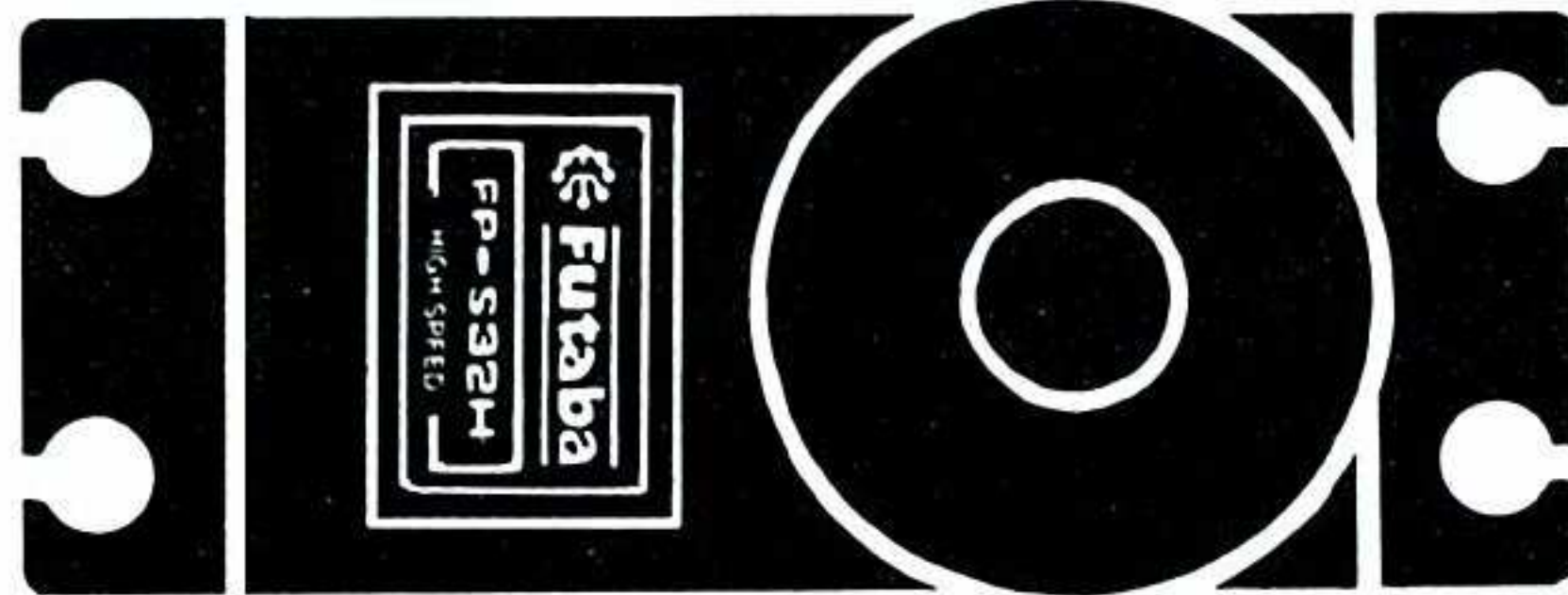
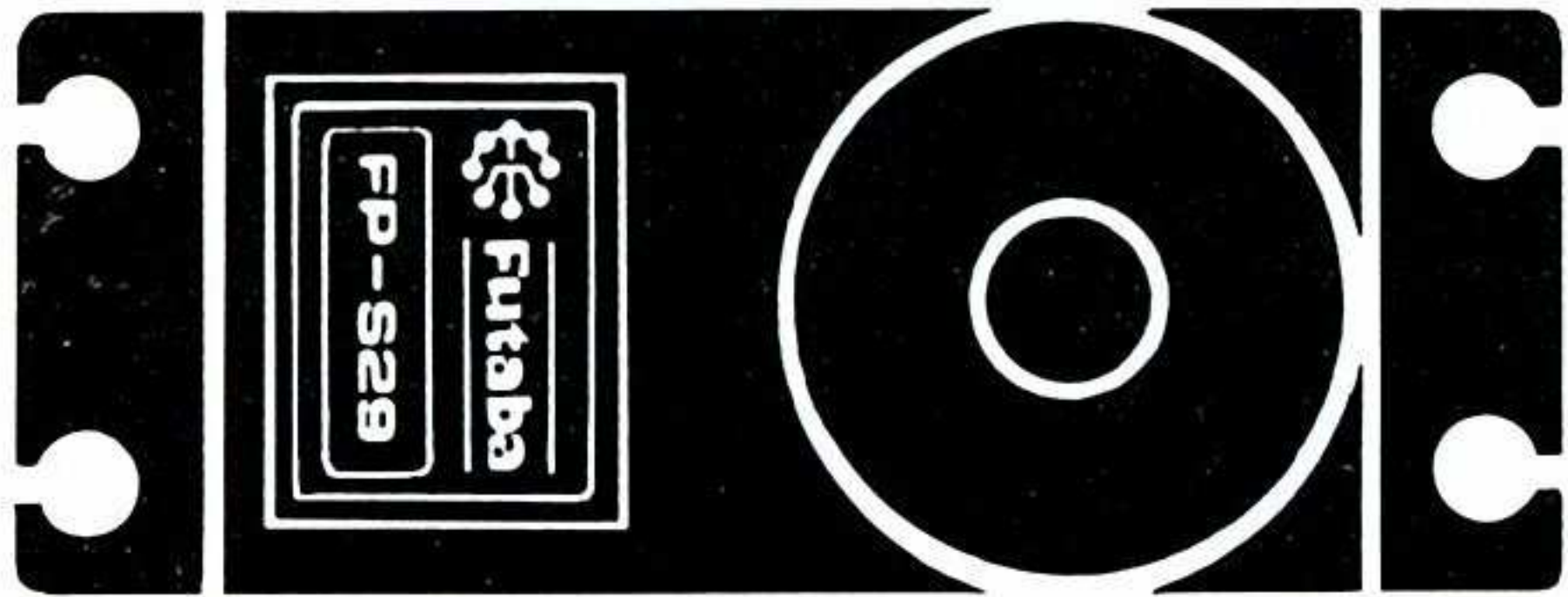
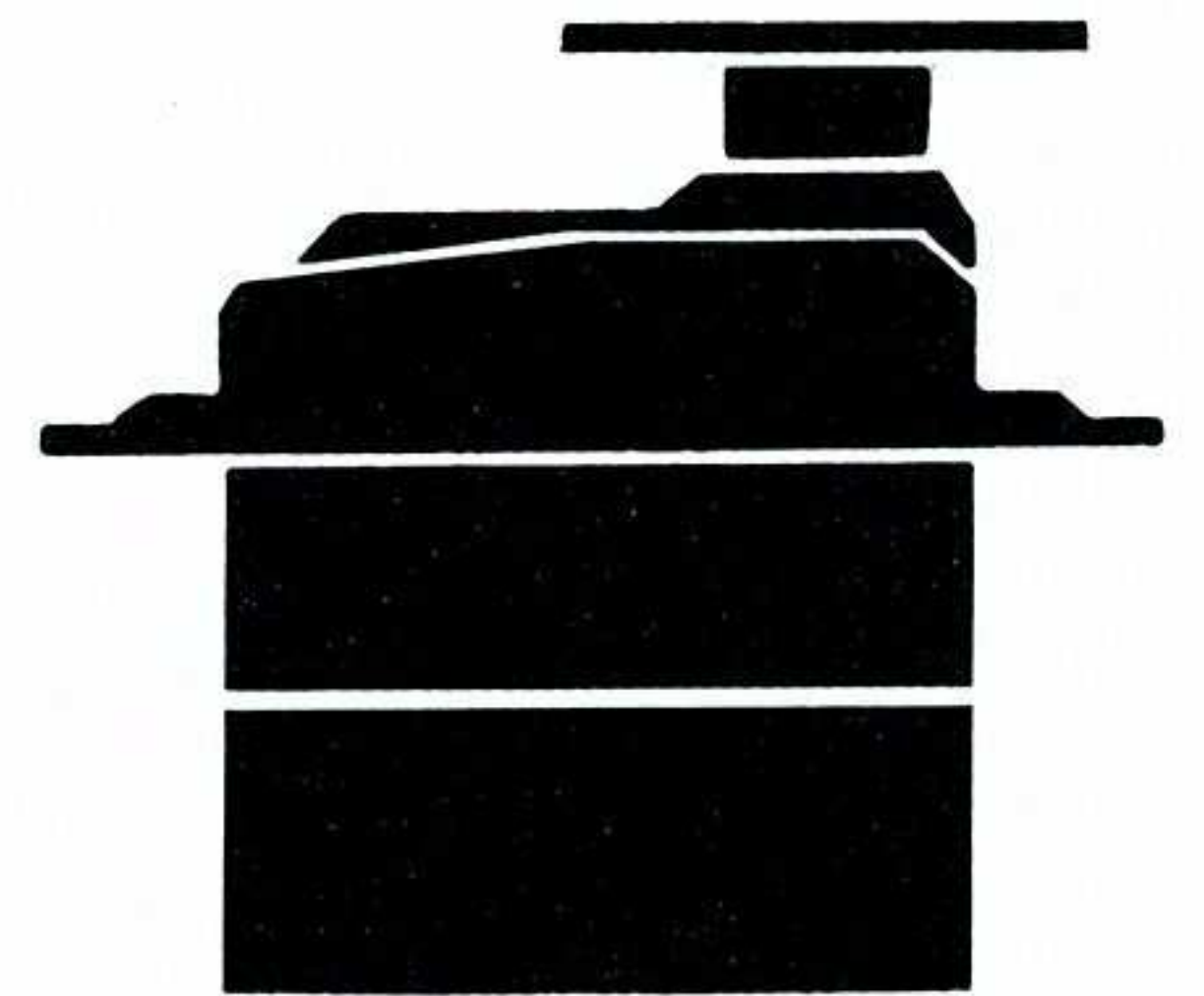
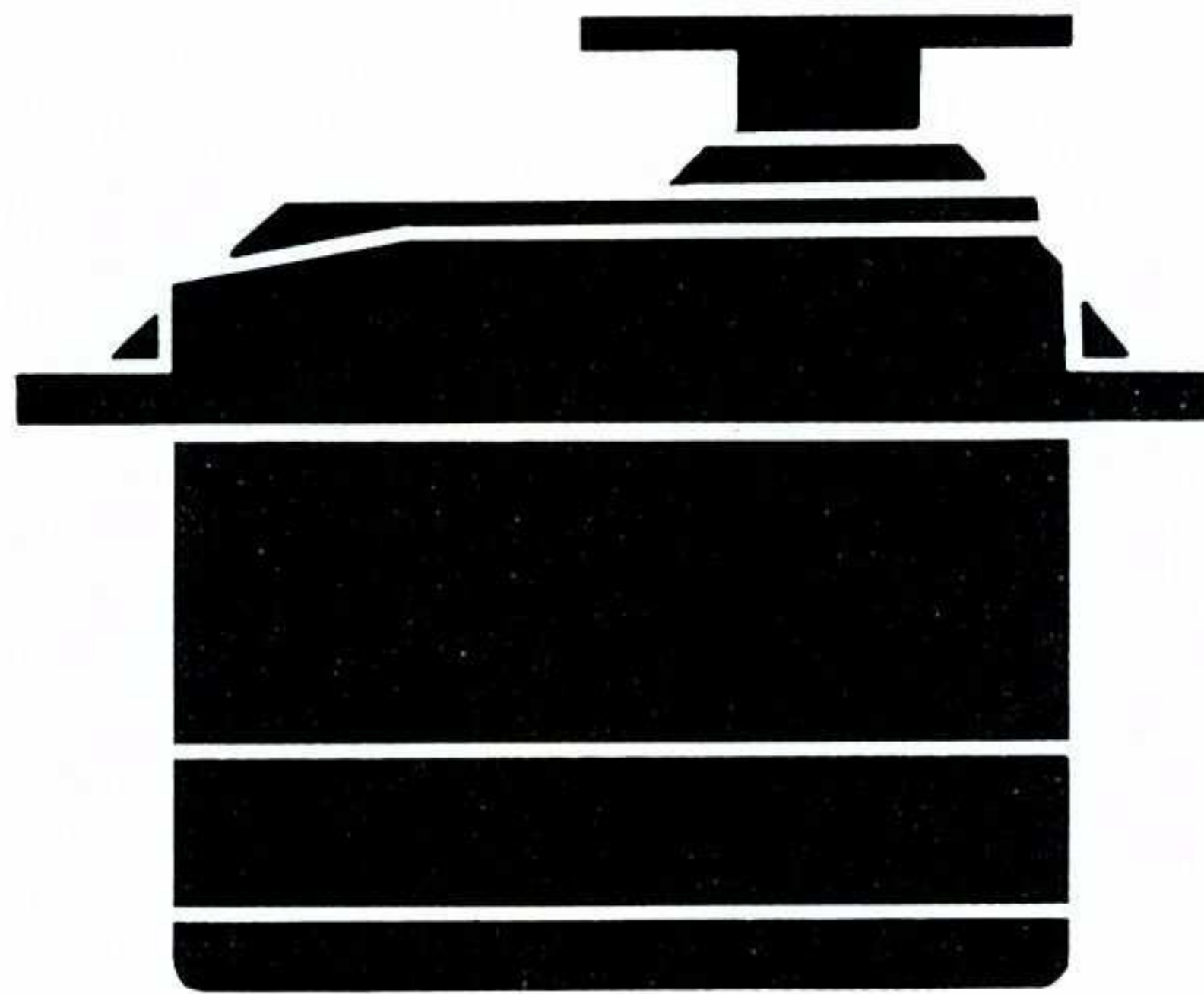
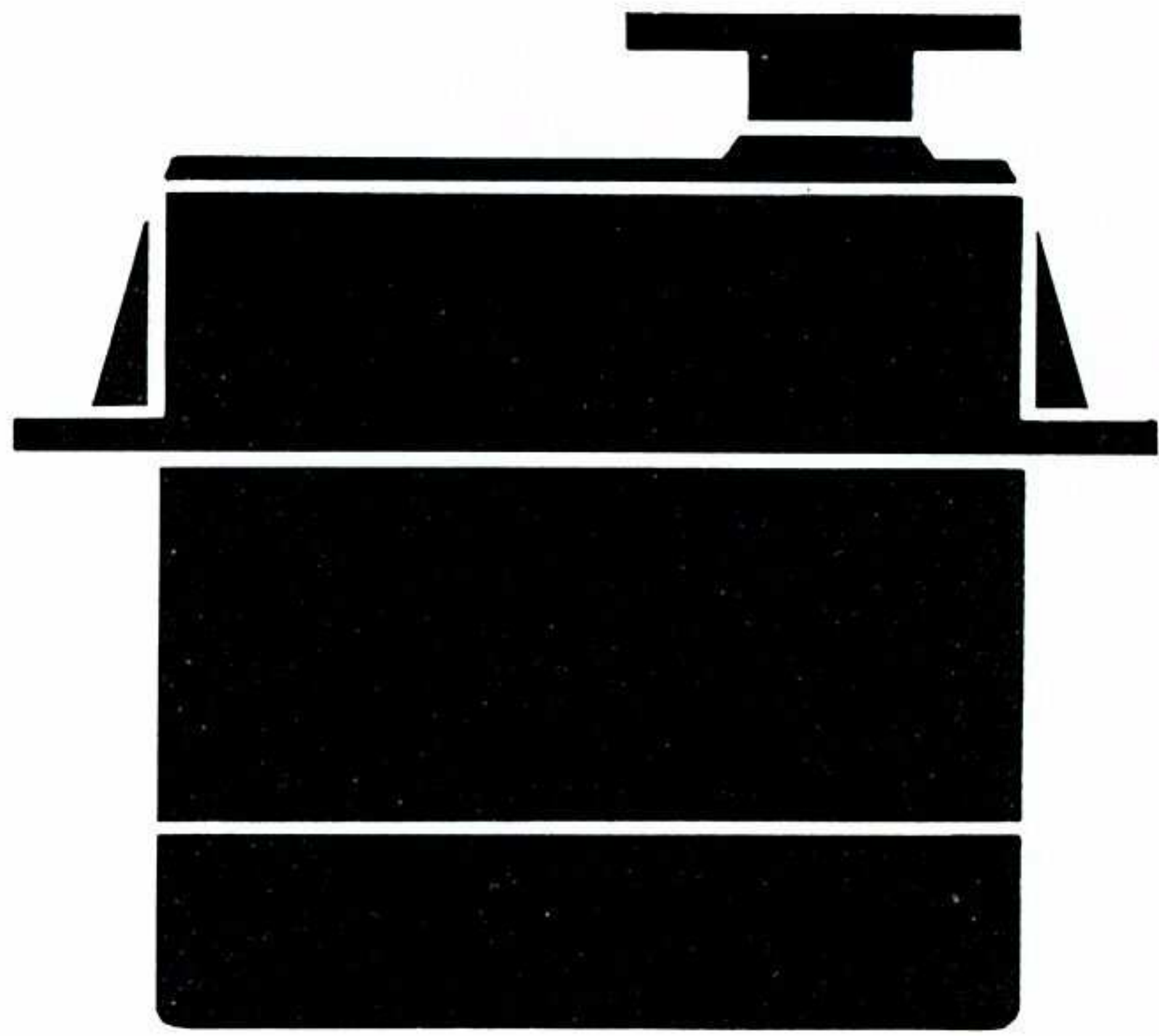


S136G (S36G) Compact landing gear retract
\$69.95 0.87" x 1.75" x 1.00"
1.48 oz./76.4 oz./in.
0.50 sec./60 degree



S148 (S48) Precision servo
\$39.95 0.77" x 1.59" x 1.58"
1.5 oz./42.0 oz./in.
0.22 sec./60 degrees

SERVOS

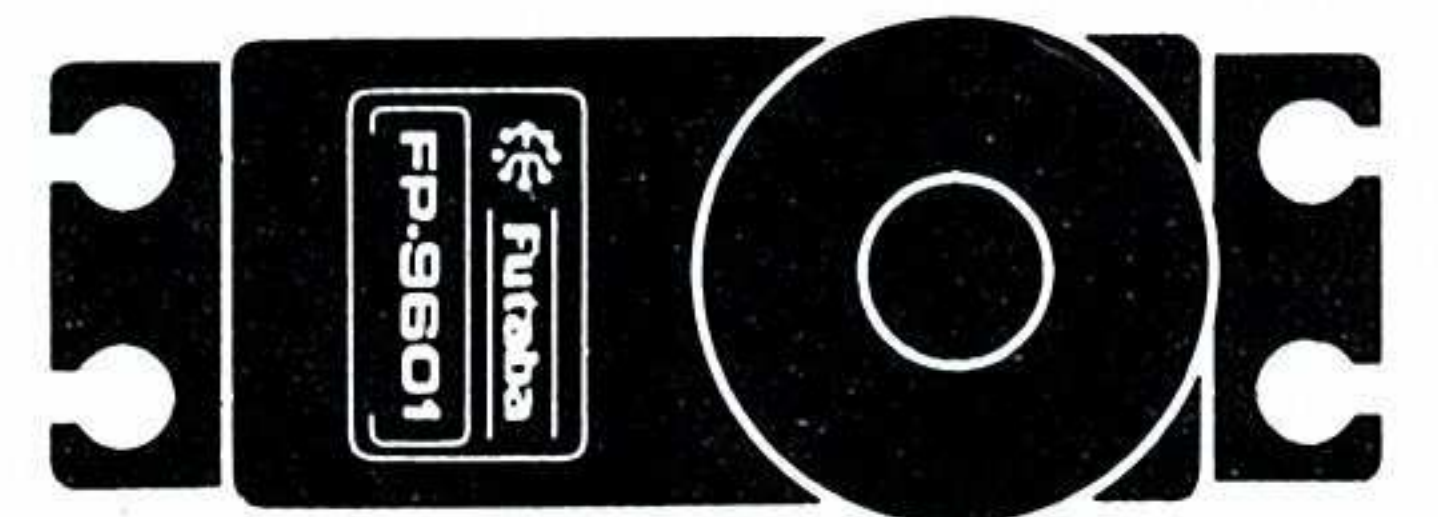
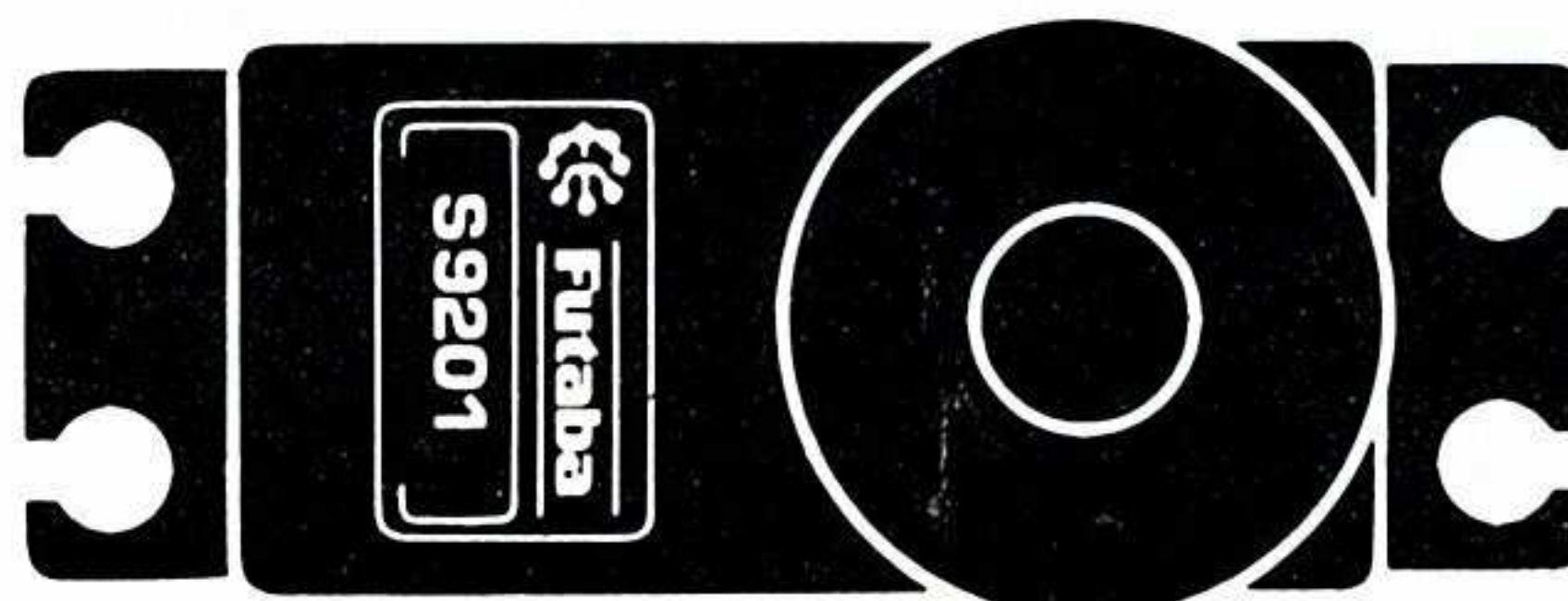
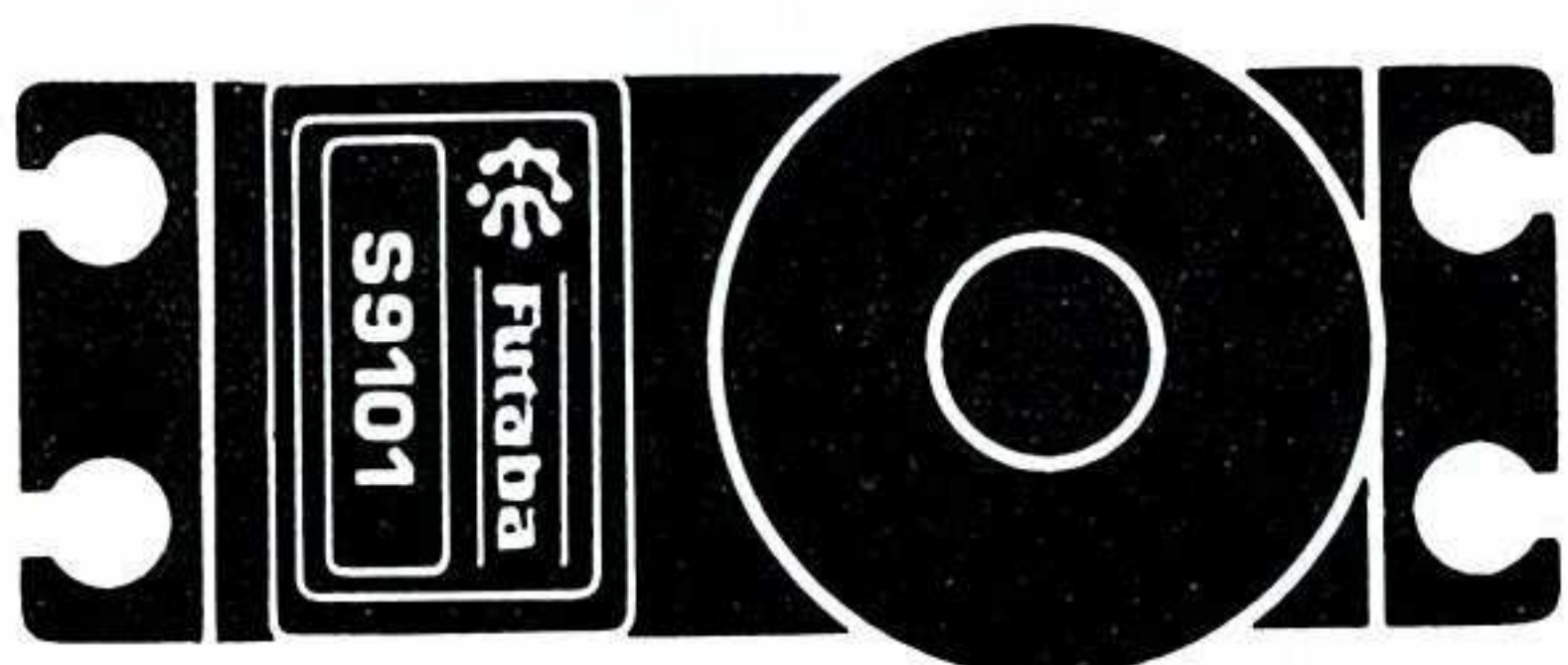
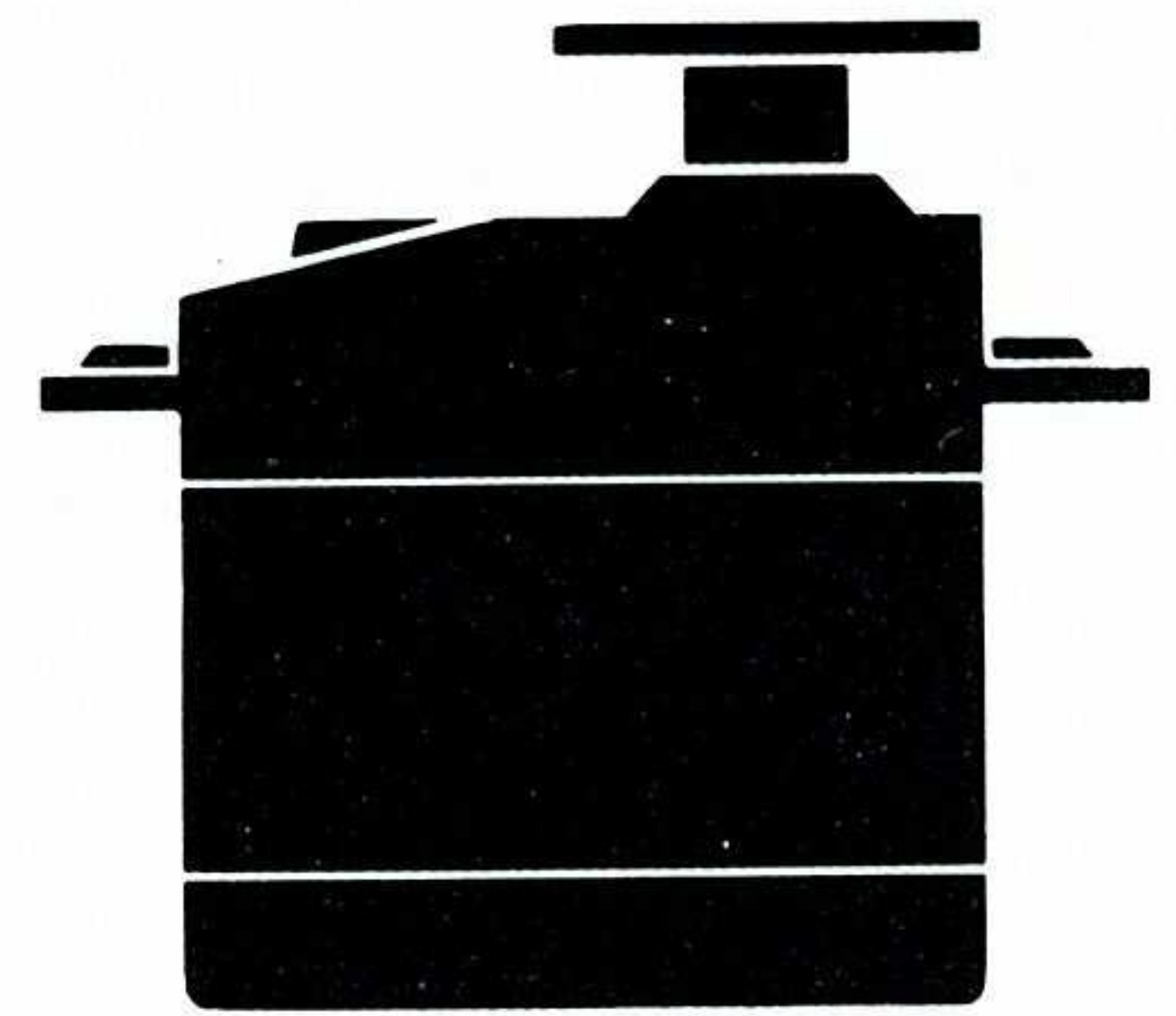
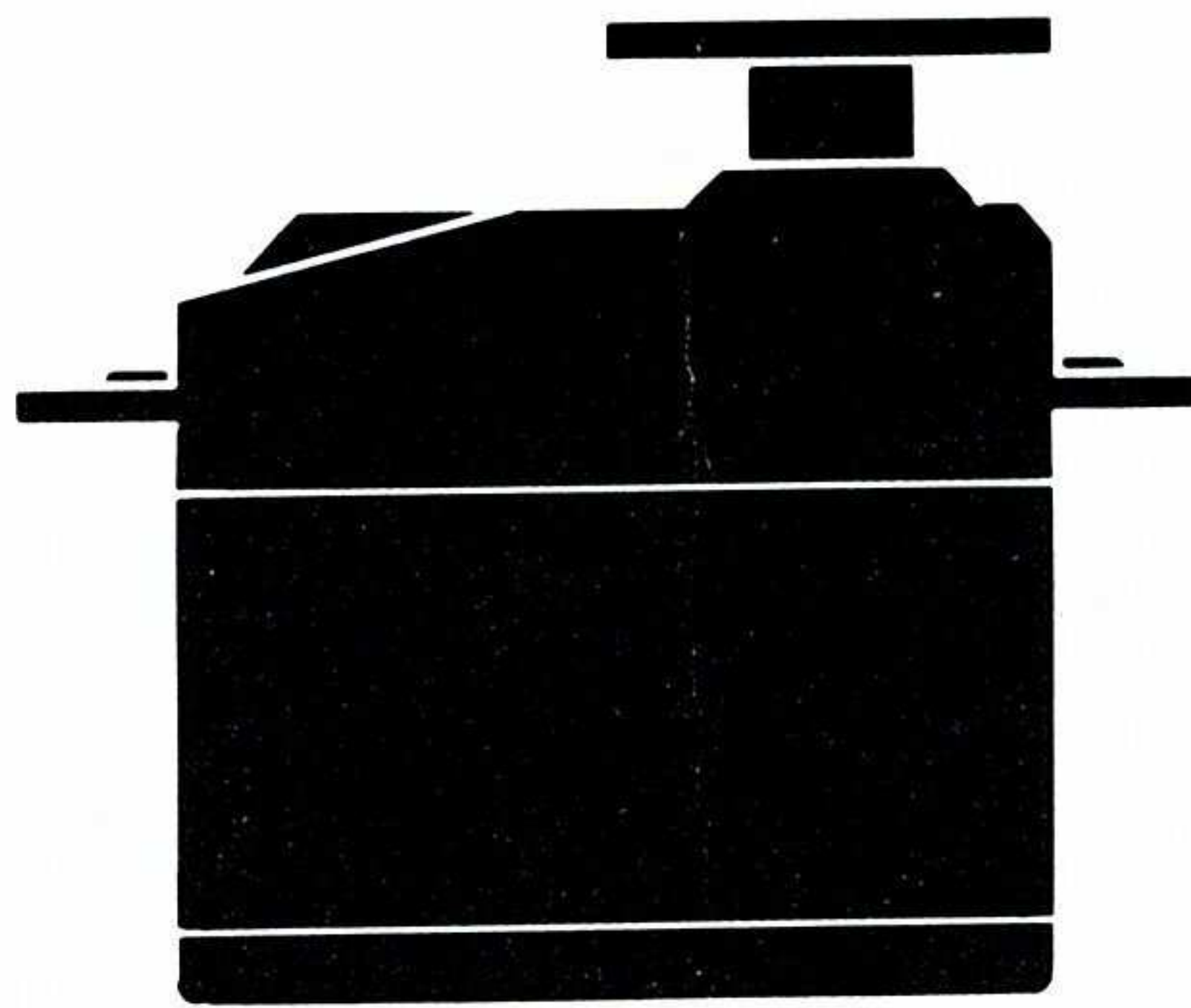
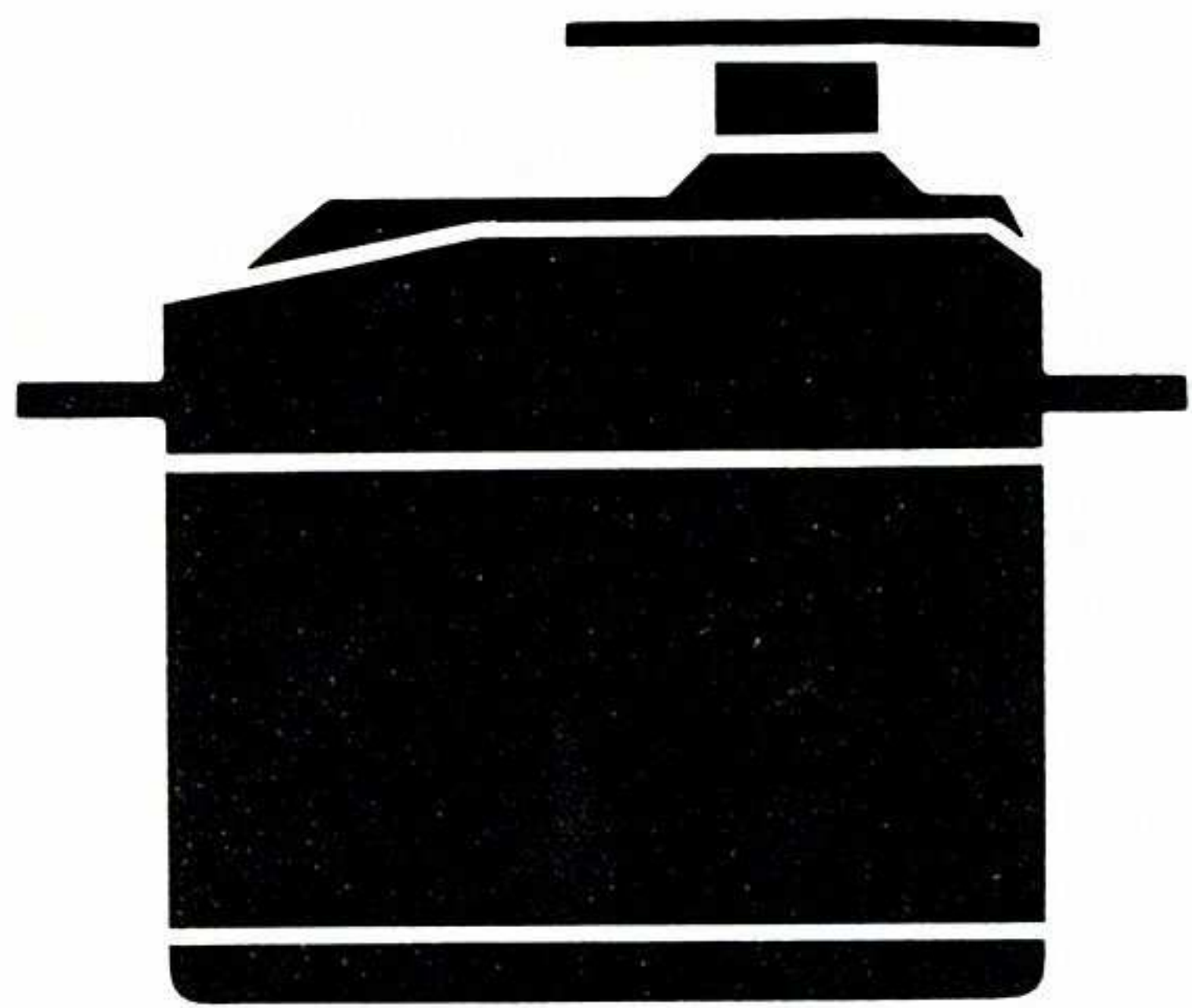


S129 (S29/S29L) Heavy duty, water tight servo
 \$44.95 0.88" x 1.75" x 1.69"
 2.1 oz./48.7oz./in.
 0.25 sec./60 degrees

S132 (S32/S32L) Mini servo
 \$54.95 0.68" x 1.43" x 1.18"
 1.1 oz./33.4 oz./in.
 0.16 sec./60 degrees

S133 (S33/S33L) Micro precision servo
 \$59.95 0.50" x 1.06" x 1.12"
 0.6 oz./27.8 oz./in.
 0.22 sec./60 degrees

S132H (S32H/S32HL) High speed mini servo
 \$54.95 0.68" x 1.43" x 1.18"
 1.1 oz./25.0 oz./in.
 0.13 sec./60 degrees



S9101 Coreless, BB servo
 \$79.95 0.77" x 1.52" x 1.36"
 1.5 oz./41.7 oz./in.
 0.17 sec./60 degrees

S9201 (Air/Heli) S9301 (S131S) Coreless BB servo
 \$79.95 0.79" x 1.59" x 1.40"
 1.7 oz./69.5 oz./in.
 0.22 sec./60 degrees

S9601 (S135/S35) Coreless mini servo
 \$79.95 Metal gear/Ball bearing output
 0.62" x 1.21" x 1.18"
 1.1 oz./36.1 oz./in.
 0.17 sec./60 degrees

S5101 (S130) Dual Ball Bearing servo
 \$59.95 0.77" x 1.52" x 1.36"
 1.4 oz./55.6 oz./in.
 0.24 sec./60 degrees

S131SH (S31SH) Coreless BB servo
 \$79.95 0.79" x 1.59" x 1.40"
 1.7 oz./44.5 oz./in.
 0.16 sec./60 degrees

RADIO CONTROL MODELS



FUTABA FX10

Futaba's FX10/All Terrain offroad car kit combines the high speeds and excitement of RC racing with the ease of assembly of a well engineered model kit. Designed by Futaba's international team of RC car experts, the FX10 incorporates many of the features of serious competition models and is as much fun to build as it is to drive. Features include 4 wheel, independent suspension with 4-link rear, monocoque racing chassis, sealed gearbox and differential, 540/05 class motor, 3-stage speed controller and lightweight polycarbonate body shell.

SPECIFICATIONS:

Scale	1:10	Wheelbase	10.24"
Overall length	17.13"	Weight (approx.)	50 oz.
Rear track	7.72"	Radio required	2 Ch. (BEC)/2 servo
Front track	7.36"		

REPLACEMENT PARTS

FX10-001	SPARE BODY SET	\$30.00	FX10-013	UPRIGHT SET (LEFT AND RIGHT)	\$5.50
FX10-002	FRONT TIRE/WHEEL SET	13.00	FX10-014	RECEIVER ANTENNA TUBE	1.00
FX10-003	REAR WHEEL/TIRE SET	15.00	FX10-015	DECAL SHEET	3.25
FX10-004	CHASSIS	12.00	FX10-016	SCREW BAG-A	2.25
FX10-005	A-PARTS	11.00	FX10-017	SCREW BAG-B	3.50
FX10-006	B-PARTS	7.50	FX10-018	SCREW BAG-C	3.50
FX10-007	C-PARTS	9.50	FX10-019	SCREW BAG-D	6.00
FX10-008	D-PARTS	8.50	FX10-020	METAL PARTS (BODY PINS, WRENCHES)	6.00
FX10-009	Q-PARTS	2.00	FX10-021	540/05 MOTOR	15.00
FX10-010	E-PARTS	11.50	FX10-022	18 TOOTH/19 TOOTH PINION GEARS	6.00
FX10-011	BUMPER	4.00	FX10-023	FRONT COIL SPRING AND DAMPER (2)	2.50
FX10-012	GEAR SET (DIFFERENTIAL)	4.00	FX10-024	REAR COIL SPRING AND DAMPER (2)	3.00
			FX10-025	3-STAGE SPEED CONTROLLER	15.00

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

PROFESSOR

REPLACEMENT PARTS

H001	MOTOR MOUNT SET	\$ 3.95	H007	PROPELLER SHAFT	3.95
H002	GEAR CASE SET	9.95	H008	PROFESSOR DECALS	9.95
H003	BATTERY HOLDER SET	3.95	H009	INSTRUCTIONS	2.95
H004	PROPELLER SET	3.95	H010	STABILIZER	29.95
H005	COWLING	11.95	H011	MAIN WING	74.95
H006	MAIN GEAR SET	9.95	H012	FUSELAGE	59.95
H3009	METAL WRENCH SET	1.95			

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

CHIPMUNK

REPLACEMENT PARTS

H001	MOTOR MOUNT SET	\$ 3.95	H1008	INSTRUCTIONS	2.95
H1001	PROPELLER ADAPTER	7.95	H1009	DECAL	17.95
H1002	38 TOOTH GEAR	2.95	H1010	VERTICAL/HORIZONTAL STABILIZER	34.95
H1003	16 TOOTH GEAR	9.95	H1011	MAIN WING	79.95
H1004	PLASTIC PARTS SET	2.95	H1012	FUSELAGE	69.95
H1005	GEAR DOWN UNIT SET	18.95	H2500-015	LF940 BEARING (1)	9.95
H1006	LANDING GEAR SET	3.95	H2500-039	L940ZZ BEARING (2)	9.95
H1007	COWLING	9.95	H2531-001	SCREW SET (10)	2.95

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



CANDY

Get into radio controlled model boating in a hurry with Candy, the RC speedboat that's ready for fun. Factory-assembled and Futaba-equipped, Candy zips through water with a sleek, V-shaped hull of high impact ABS for ski boat speed and maneuverability.

Unsinkable by virtue of an expanded polystyrene radio tray/insert, Candy is extremely stable, easy for even novice sailors to control. Power comes from a 540/High Output electric motor, with both speed and power screws.

Candy's 2 channel Futaba radio system comes installed, too. All you do is attach the screw, apply the decals and add batteries and water.

Candy Outfit One 2P-C-27

Candy and the pistol grip Magnum 2P gives you steering wheel control with R102GR/BEC receiver and two S148 servos installed. Flat-wound, resistor speed control with reverse. 27Mhz.

Candy Outfit Two 2P-MC-C-27N

Nothing could be sweeter than Candy with Futaba's 2P system plus R102GR/BEC receiver and S148 servo, and MC112B MOSFET electronic speed control. High efficiency, maintenance-free MC112B features proportional forward with reverse and built-in check circuitry. 27Mhz. INCLUDES 7.2v/1200mAh NiCd and Charger.

Candy Outfit Three 2NBL-MC-C-27N

Candy 2NBL system with R102GR/BEC receiver, S148 servo, and MC112B MOSFET electronic speed control features proportional forward with reverse and built-in check circuitry. 27Mhz. INCLUDES 7.2v/1200mAh NiCd and Charger.

REPLACEMENT PARTS

CD-1	MOTOR	\$14.95	CD-8	TOOLS (WRENCHES, SCREWS)	\$2.95
CD-2	RESISTOR SPEED CONTROL	12.95	CD-9	ROD SET BALL LINK, (ROD END, ROD)	2.95
CD-3	UNIVERSAL JOINT (A & B)	2.95	CD-10	VELCRO/SERVO TAPE	2.95
CD-4	RUDDER SET W/SCREW	2.95	CD-11	COCKPIT COVER	6.95
CD-5	PROPELLER "L" (POWER)	2.95	CD-12	STERN HATCH COVER	6.95
CD-6	PROPELLER "S" (SPEED)	2.95	CD-13	CABIN COVER	6.95
CD-7	DRIVE SHAFT AND PIPE	6.95	CD-14	DECAL SHEET	6.95

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



RADIO CONTROL MODELS



THE HIROBO · FUTABA PROFESSOR

With the new Professor Almost-Ready-to-Fly (ARF) radio control trainer, Futaba has made electric-powered RC flying easier than ever.

Extremely stable design and quiet operation make the Professor the ideal first plane for beginners. Special, lightweight materials are used for exceptional strength and rigidity, and built-up, pre-covered wing, stab and tail make assembly simple and easy.

Pushrods and 540SH motor are factory installed.

SPECIFICATIONS:

Type:	Electric powered/trainer	Battery:	7.2v/1200mAh NiCd (not included)
Length:	35.04"	Radio:	3-4 channel system with electronic speed control (MC109T) and 2 servos. 4NBL Attack E recommended (Radio not included).
Wing area:	400 sq. in.		
Weight:	2.02 lbs. (including radio and NiCd)		
Motor:	RS540SH w/3:1 gearbox		



THE HIROBO · FUTABA CHIPMUNK

The new Hirobo/Futaba Chipmunk is designed for the more experienced RC flyer and brings a whole new level of performance and excitement to electric flight.

This Almost-Ready-To-Fly kit performs aerobatics with precision and ease in the hands of advanced pilots.

Fuselage and wings are already finished and pre-covered in colorful, realistic graphics. Also included in the kit are landing gear and all the necessary linkages and hardware. Pushrods and motor are factory installed, reducing construction time to a minimum.

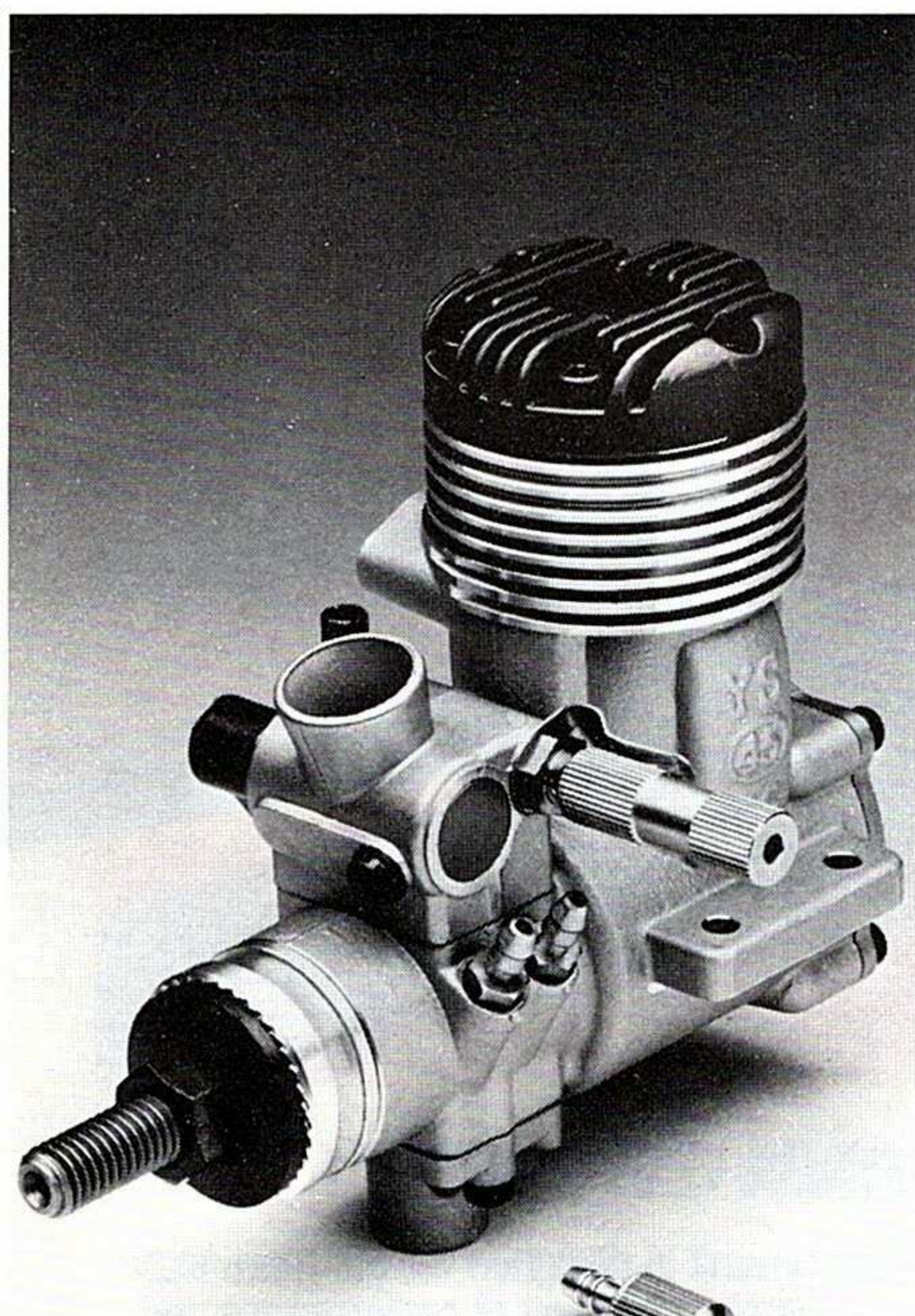
Because weight is critical, the Futaba 4NBL Attack E system, with MCR-4A and micro S133 servos is recommended.

SPECIFICATIONS:

Type	Electric powered, aerobatic	Motor	Top Gun 9017 w/BB reduction gearbox
Length	900mm (35.43")	Battery	7.2v-8.4v/1200mAh NiCd (NOT included)
Width	1200mm (47.24")	Radio	4 channel system with electronic speed control (MC109T) and 2 servos. 4NBL Attack E recommended (Radio not included).
Wing Area	22.5d m2 (360 sq. inch)		
Weight	1200g (2.65 lbs.)		



YS FUTABA MODEL ENGINES



YS-FUTABA 45F-S/45F-R

The YS.Futaba 45F is the answer to the sport flyer's dreams, a high performance engine that is easy to tune and maintain.

Available in side (FS) or rear (FR) exhaust configurations, the YS.Futaba 45 delivers exceptional power for its size and weight.

Features include YS.Futaba VPS fuel injection, ABC design, Schneurle porting and integrated carburetor. (Optional YS.Futaba side exhaust muffler available.)

SPECIFICATIONS

45F-S/45F-R

Bore	21.8mm
Stroke	20.0mm
Displacement	7.45cc
Weight	400g
Practical rpm	2,000-18,000

61F-R/61F-S

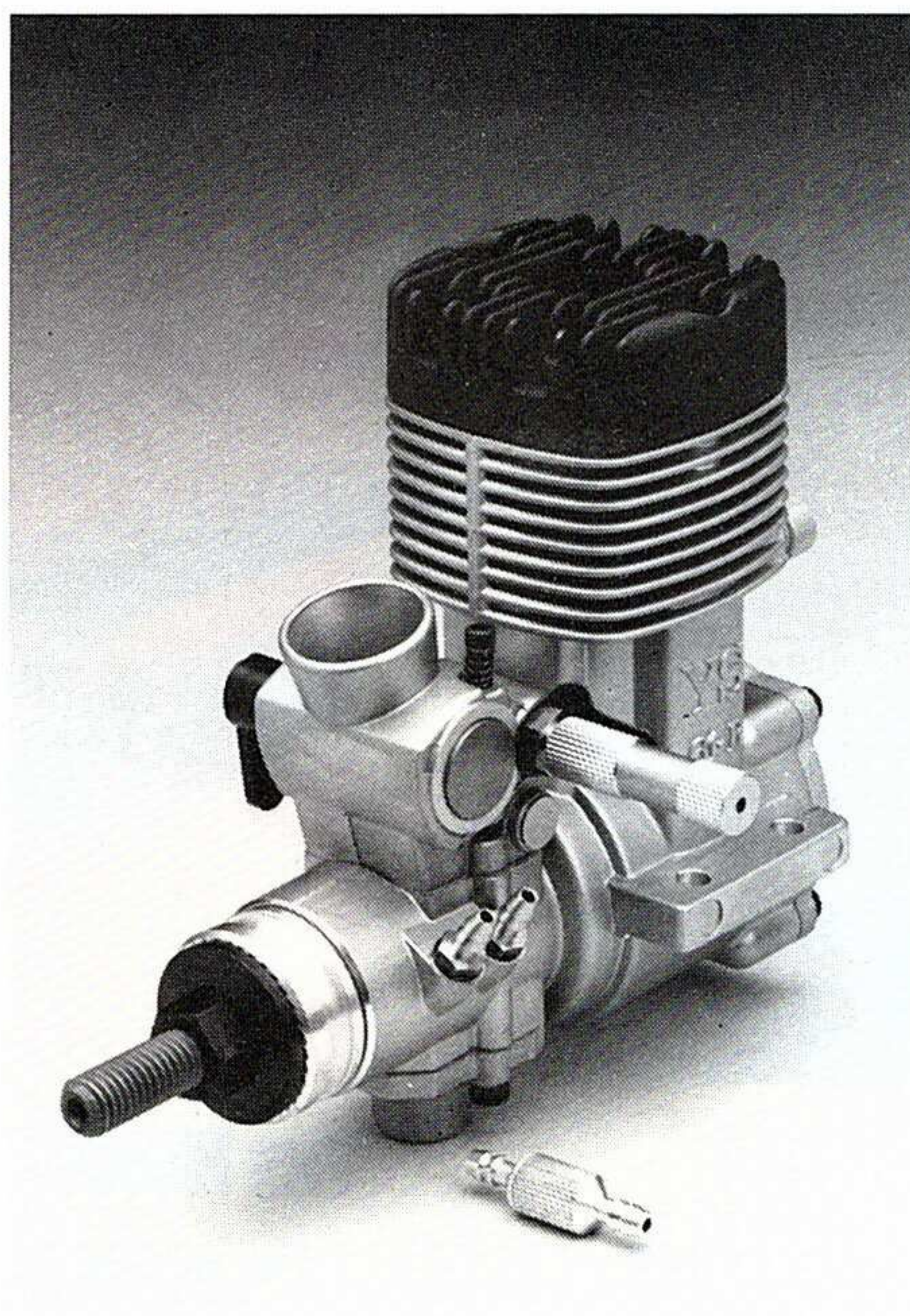
Bore	23.0mm
Stroke	24.0mm
Displacement	9.97cc
Weight	565g
Practical rpm	2,000-18,000

61F-S-H/61F-R-H

Bore:	23.0mm
Stroke:	24.0mm
Displacement:	9.97cc
Weight:	565g
Practical rpm:	2,000-18,000

120SF

Bore	30.4mm
Stroke	27.5mm
Displacement	19.96cc
Weight	950g
Practical rpm	2,000-12,500



YS-FUTABA 61F-R/61F-S

An evolution of the National Pattern-winning YS.Futaba 60F, the new 61F Long Stroke develops additional torque and thrust to give the serious competition flyer the efficiency to run larger props. The 61F, available in both side and rear exhaust configurations, produces a very flat power band and yields exceptional performance due to its use of the YS.Futaba VPS fuel injection system.

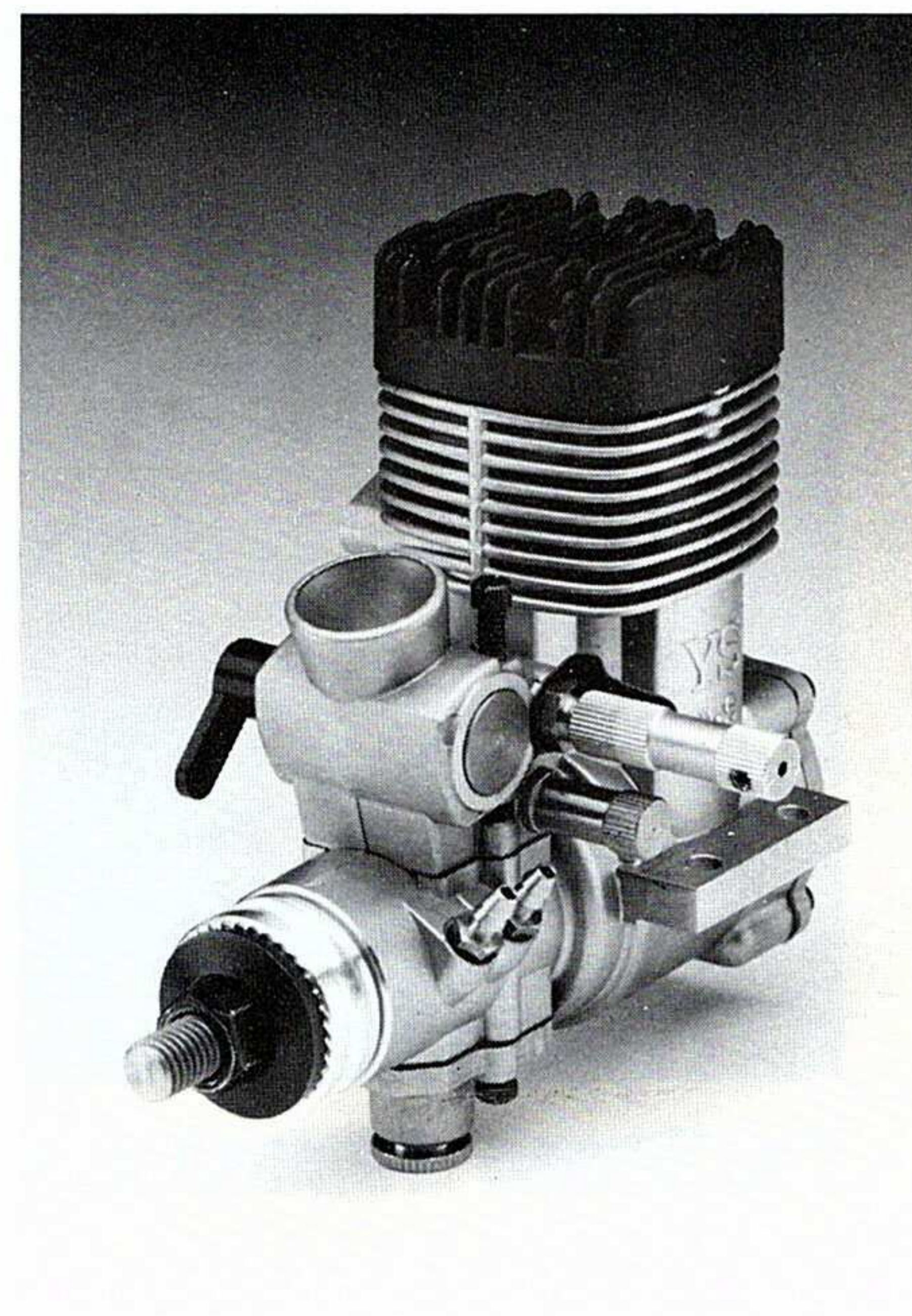
Another important feature of the YS.Futaba 61F is a unique, offset butterfly carburetor, which provides linear throttle response. ABC design, precision CNC machining, adjustable pressure regulator and convenient needle valve adjustment make the 61F Long Stroke a true pattern champion.

YS-FUTABA 120SF

Destined for greatness, the new YS.Futaba 120SF is a true model engine tour de force.

At 19.96cc, the 120SF is the largest displacement legal for F3A competition. To give YS.Futaba fliers the maximum power advantage, the 120SF combines 4-Cycle design, integrated fuel injection and supercharging.

In addition to increased power output throughout the rpm range, the 120SF produces superior performance during steep climbing or inverted flight and is not susceptible to 4-Cycle detonation.

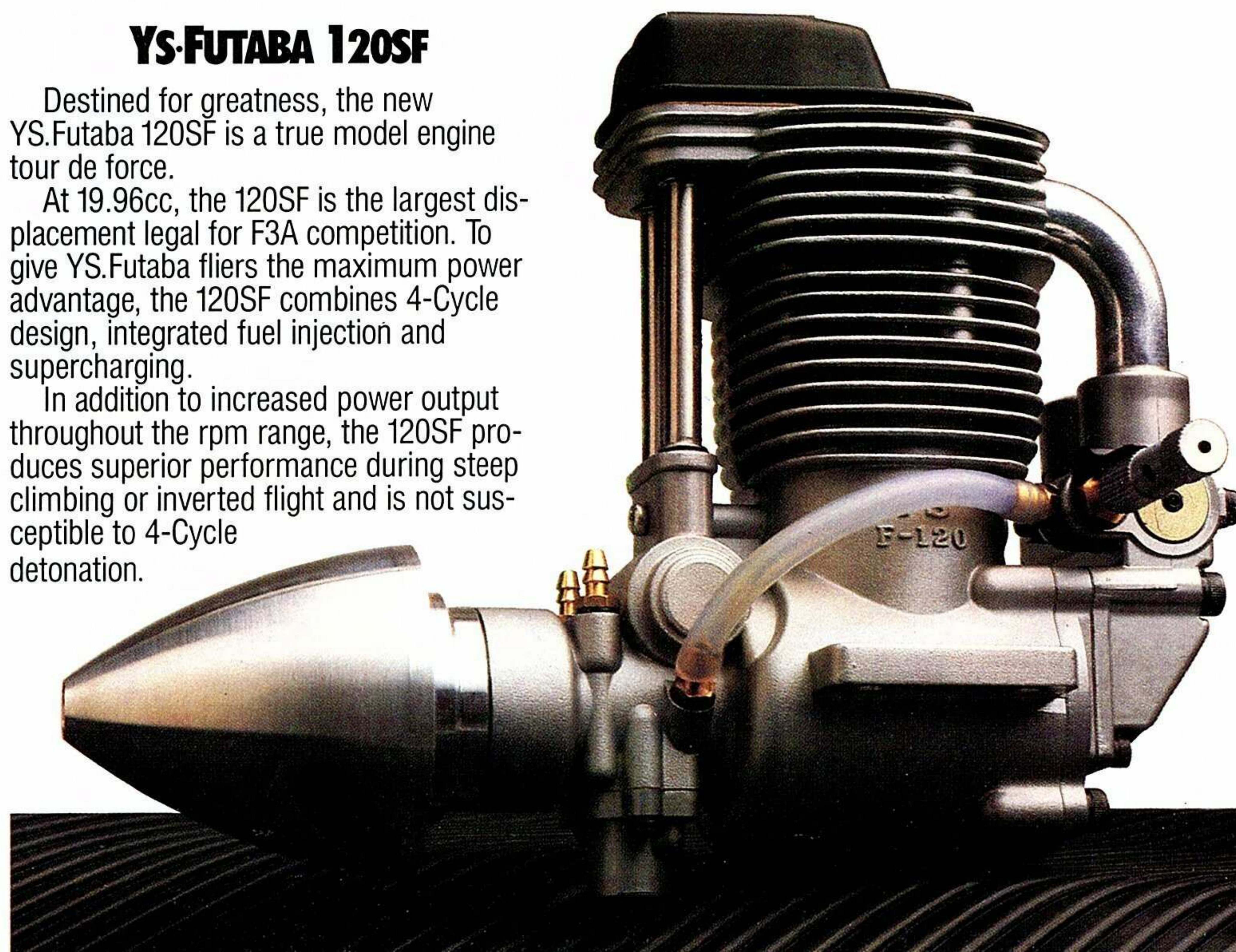


YS-FUTABA 61F-S-H/61F-R-H

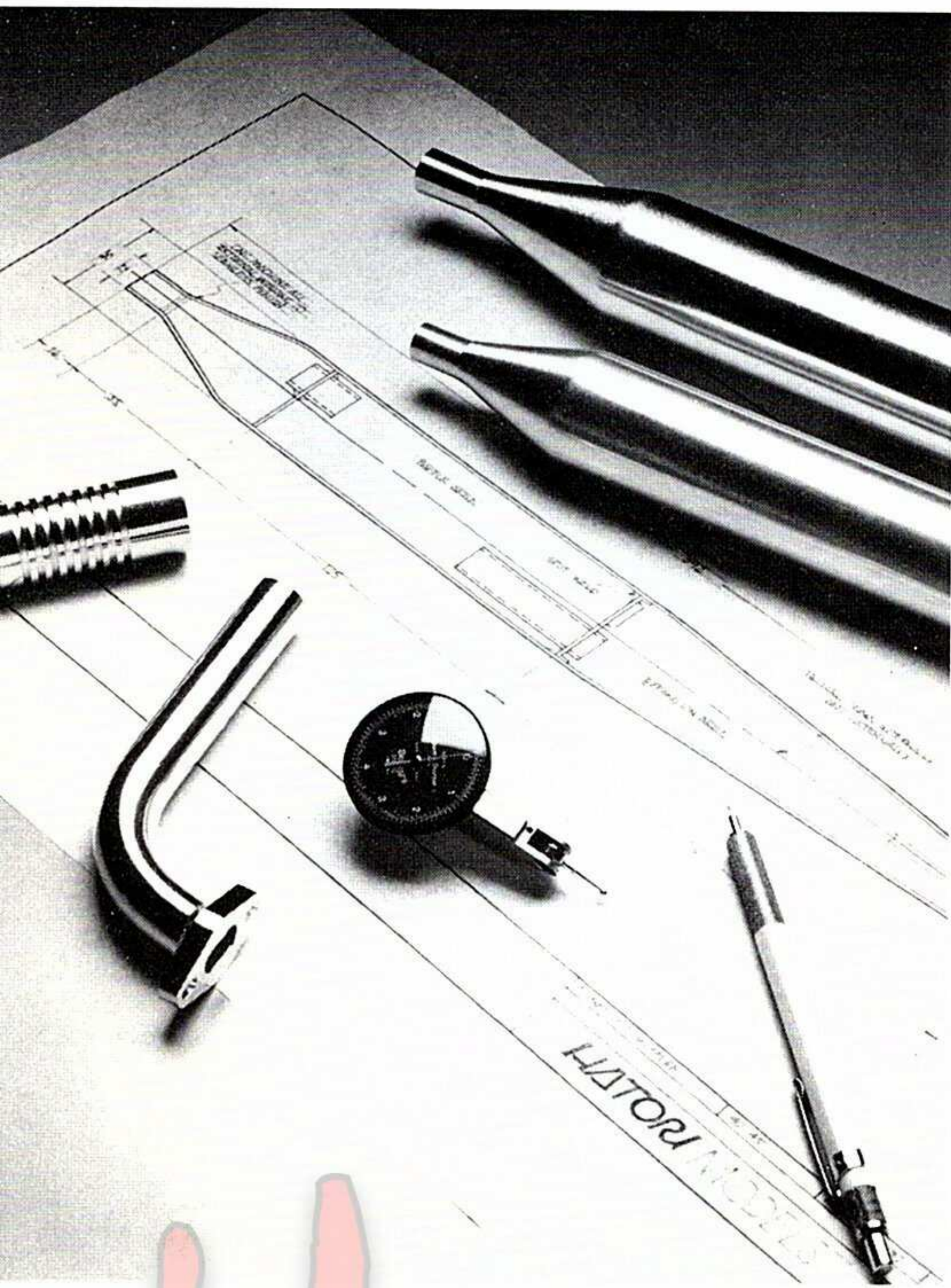
For the R/C helicopter pilot who wants only the finest, YS.Futaba offers the new 61FH in side (FS-H) and rear (FR-H) exhaust versions.

Based on the same championship-winning design of YS.Futaba aircraft engines, the 61FH incorporates a ringed piston for easier starts and cooler operation.

Features include YS.Futaba VPS fuel injection for superior throttle response when hovering. The 61FH is also unaffected by tank position, rolls, loops or inverted flight.



HATORI MUFFLERS



TUNED PIPES AND MUFFLERS

PART NO. DESCRIPTION PRICE

AIRPLANE TUNED PIPE/MUFFLERS

Y00010	3.5cc Tuned pipe/muffler	42.25
Y00015	7.5cc Tuned pipe/muffler	65.75
Y00020	10cc Tuned pipe/muffler	75.25
Y00025	10cc Tuned pipe/muffler (Bent)	84.50
Y00030	10cc Tuned pipe/muffler (Long Chamber)	75.25
Y00035	10cc Tuned pipe/muffler (Long Chamber/Bent)	84.50
Y00040	15-20cc Tuned pipe muffler	114.75
Y00045	10cc Muffler	56.50
Y00050	7.5cc Scale muffler	51.75
Y00055	7.5cc Scale muffler (side mount)	51.75
Y00060	10cc Scale muffler	56.50
Y00065	10cc Scale muffler (side mount)	56.50
Y00208	YS 1.20 tuned muffler	75.75

CONNECTORS

Y00090	3.5cc Silicone connector	2.95
Y00095	7.5cc Silicone connector	3.75
Y00100	10cc Silicone connector	4.75
Y00115	7.5cc Header/pipe connector/ Aluminum	20.25
Y00120	10cc Header/pipe connector/ Aluminum	24.50
Y00125	3.5cc Pipe and connector clamps	2.75
Y00130	7.5cc Pipe and connector clamps	2.75
Y00135	10cc Pipe and connector clamps	2.75
Y00150	3.5cc Silicone connector clamp	1.75
Y00155	7.5cc Silicone connector clamp	1.75
Y00160	10cc Silicone connector clamp	1.75
Y00165	7.5cc Connector replacement rings	2.50
Y00170	10cc Connector replacement rings	2.75
Y00175	3.5cc Pipe extender	5.50
Y00180	7.5cc Pipe extender	6.50
Y00185	10cc Pipe extender	7.50
Y00190	3.5-7.5cc Tail pipe	8.50
Y00195	10cc Tail pipe	9.50
Y00200	10cc Tail pipe (short)	9.50
Y00205	3.5-7.5cc Tail pipe (silicone)	5.50
Y00210	10cc Tail pipe (long)	14.95

HEADERS AND MANIFOLDS

PART NO. DESCRIPTION PRICE

.21 TO .30

Y00215	Side Mount/OS.21-25FSR, Enya.21CX, SS.25-.30	16.95
Y00220	Side mount/Enya.21-.25CX	16.95
Y00225	Short radius/OS.21-.25FSR, Enya.21CX, SS.25-.30	16.95
Y00230	Short radius/Enya.21-.25CX	16.95
Y00285	Dash/OS.21-25FSR, Enya.21CX, SS.25-.30	16.95
Y00290	Dash/Enya.21-.25X	16.95
Y00305	Joker/OS.21-.25FSR, Enya.21CX, SS.25-.30	16.95

.40 TO .45

Y00315	Side mount/OS.40-.45FSR, Enya.40-49X-CX, YS-Futaba.45FS	18.75
Y00320	Short radius/OS.40-.45FSR, Enya.40-49X-CX, YS-Futaba.45FS	18.75
Y00325	Cosmos/OS.40-.45FSR, Enya.40-49X-CX, YS-Futaba.45FS	18.75
Y00330	Arrow/OS.46VF, Enya.45CXL, YS-Futaba.45FR	24.50
Y00335	Arrow/OS.40-.45FSR	25.50
Y00340	Arrow/Enya.40-49X-CX	25.50
Y00345	Arrow/YS-Futaba.45FS	25.50
Y00360	Curare/OS.40-.45FSR, Enya.40-49X-CX, YS-Futaba.45FS	18.75
Y00380	Citation/OS.46VF, Enya.45CXL, YS-Futaba.45FR	24.50
Y00410	Dash Five/OS.46VF, Enya.45CXL, YS-Futaba.45FR	24.50
Y00415	Aurora/OS.40-.45FSR, Enya.40-49X-CX, YS-Futaba.45FS	18.75
Y00420	Aurora/OS.46VF, Enya.45CXL, YS-Futaba.45FR	24.50
Y00425	Flash/OS.40-.45FSR, Enya.40-49X-CX, YS-Futaba.45FS	18.75
Y00430	Supra Fly/OS.40-.45FSR, Enya.40-49X-CX, YS-Futaba.45FS	18.75
Y00435	Supra Fly/OS.46VF, Enya.45CXL, YS-Futaba.45FR	24.50

.60/.61

Y00440	Side mount/OS.61FSR, Enya.60X, YS-Futaba.60FS	18.75
Y00445	Short radius/OS.61FRS, Enya.60X, YS-Futaba.60FS	18.75
Y00450	Curare/OS.61FSR, Enya.60X, YS-Futaba.60FS	18.75
Y00455	Arrow/Enya.60X, YS-Futaba.60FR	24.50
Y00460	Arrow/OS.61VF	24.50
Y00465	Arrow/YS-Futaba.60FS	28.25
Y00470	Arrow/OS.61FSR, Enya.60X	28.25
Y00475	Citation/Enya.60X, YS-Futaba.60FR	24.50
Y00480	Citation/OS.61VF	24.50
Y00485	Atlanta/Enya.60X, YS-Futaba.60FR	24.50
Y00490	Atlanta/OS.61VF	24.50
Y00495	Cosmos, Aurora/Enya.60X, YS-Futaba.60FR	24.50
Y00500	Cosmos, Aurora/OS.61FSR, Enya.60X, YS-Futaba.60FS	24.50
Y00505	Nova Lily/OS.61FSR, Enya.60X, YS-Futaba.60FS	23.50
Y00510	Magic/Enya.60XL, YS-Futaba.60FS	29.95
Y00515	Magic/OS.61VF	29.95
Y00520	Sky Master/Enya.60XL, YS-Futaba.60FR	29.95
Y00525	Sky Master/OS.61VF	29.95

HEADERS AND MANIFOLDS

.60

Y00530	Omega/OS.61FSR, Enya.60X, YS-Futaba.60FS	22.50
Y00535	Sigma Mk.II/Enya.60XL, YS-Futaba.60FR	29.95
Y00540	Sigma Mk.II/OS.61VF	29.95
Y00560	Atlanta/Rossi R.60	29.95
Y00565	Arrow/Rossi R.60	29.95
Y00570	Magic/Rossi R.60	32.95
Y00575	Sky Master/Rossi R.60	32.95
Y00580	Arrow(140mm)/Enya.60XL, YS-Futaba.60FR	24.50
Y00585	Dash Five/Enya.60XL, YS-Futaba.60FR	24.50
Y00590	Dash Five/OS.61VF	24.50
Y00595	Joker/Enya.60XL, YS-Futaba.60FR	24.50
Y00600	Joker/OS.61VF	24.50
Y00605	Supra Fly/OS.61FSR, Enya.60X, YS-Futaba.60FS	20.75
Y00610	Supra Fly/Enya.60X, YS-Futaba.60FR	24.50
Y00615	Supra Fly/OS.61VF	24.50

1.20

Y00211	Exhaust pipe (outside) YS 120SF	54.95
Y00212	Exhaust pipe (inside) YS-Futaba 120SF	54.95
Y00213	Exhaust pipe (outside) OS120	54.95
Y00214	Exhaust pipe (inside) OS120	54.95

HELICOPTER AND CAR

HELICOPTER TUNED PIPE/MUFFLERS

Y00070	3.5cc Tuned pipe/muffler	51.75
Y00072	60 Heli tuned muffler	69.95
Y00074	05.25-2.8 FSR-H Heli muffler (for Shuttle or Baron 20)	27.95
Y00075	10cc Tuned pipe/muffler	108.25
Y00076	08.28-.32/Enya SS30 Heli muffler (for Concept)	27.95
Y00078	Heli tuned muffler adapter	10.95
Y00080	3.5cc Muffler	37.50
Y00092	Heli tuned muffler mting. bracket	1.49
Y00094	Heli tuned muffler mting. clamps	2.95
Y00096	Heli tuned muffler silicone connector	4.95
Y00097	Heli tuned muffler silicone tail pipe	4.49
Y00098	Heli tuned muffler tie wraps	.99
Y00105	Silicone connector	5.50
Y00140	3.5cc pipe and connector clamps	1.95
Y00145	10cc pipe and connector clamps	2.75

HELICOPTER HEADERS

Y00645	Kalt frame/YS-Futaba.60FSH	32.95
Y00650	Kalt frame/OS.61FSRH, Enya.60XF	32.95
Y00655	Kalt Hirobo frame body/ YS-Futaba.60FRH	32.95
Y00660	Kalt Hirobo frame body/OS.61.VFH	32.95
Y00665	Kalt Hirobo frame body/ Enya.60XLF	32.95
Y00670	Kalt Hirobo body/ YS-Futaba.60FSH	32.95
Y00675	Kalt Hirobo body/OS.61FSRH, Enya.60XF	32.95
Y00680	Fox-60/YS-Futaba.60FSH	32.95
Y00685	Fox-60/OS.61FSRH, Enya.60XF	32.95
Y00690	Baron/OS.28FSRH, Enya SS.30	16.95
Y00695	Shuttle/OS.28FSRH, Enya SS.30	16.95

CAR MUFFLERS AND HEADERS

Y00085	.21 On/Off road tuned pipe/muffler	28.25
Y00110	.21 On/Off road silicone connector	3.75
Y00245	.21 Road racing/OS.21VF, Enya.21CXL	18.75
Y00296	1:8 Off road	24.50
Y00300	.21 Off road/OS.21FSR, Enya.21CX	24.50

BATTERIES AND CHARGERS



NR-4G (NR-4K)
Lightweight NiCd
2.18" x 1.18" x 0.56"
4.8v/250mAh
2.0 oz.
\$19.95

NR-4EA (NR-4EB)
Flat pack NiCd
2.40" x 2.44" x 0.73"
4.8v/500mAh
4.2 oz.
\$21.95

NR-4IM (NR-4I)
Extra high power NiCd
2.64" x 2.05" x 1.04"
4.8v/1000mAh
6.7 oz.
\$44.95

NR-4LB (J-Series)
Extra high power NiCd
2.21" x 2.65" x 0.59"
4.8v/1000mAh
6.7 oz.
\$44.95

NR-4M (NR-4J)
Flat pack NiCd
2.25" x 1.97" x 0.56"
4.8v/500mAh
3.3 oz.
\$19.95

NR-4NM (NR-4NB)
High power NiCd
2.40" x 1.81" x 0.67"
4.8v/700mAh
4.4 oz.
\$34.95

NR-4QB (Shrink wrap NR-4H)
2.00" x 1.12" x 1.12"
4.8v/500mAh
3.3 oz.
\$19.95

NR-4QM (Shrink wrap NR-4C)
2.00" x 1.12" x 1.12"
4.8v/500mAh
3.3 oz.
\$19.95

Parentheses indicate Power Packs with J-connectors for 3PG/G-Series (FM) / J-Series (PCM)

NR-5
High voltage NiCd
2.87" x 1.97" x 0.59"
6v/500mAh
4.2 oz.
\$29.95

NR-5G Lightweight/High voltage NiCd
2.81" x 1.18" x 0.56"
6v/250mAh
2.5 oz.
\$29.95

NR-5PM (NR-5PB)
High voltage flat pack NiCd
3.35" x 1.26" x 0.69"
6v/450mAh
3.1 oz.
\$29.95

COMBO PACKS

FBPK-1 Combo pack
2E 72/75MHz
NT-10/NR-4C/FBC-2B
\$94.95

FBPK-2 Combo pack
2E 27MHz and 2F
NT-8C/NR-4C/FBC-2A
\$79.95

FBPK-4 Combo pack
For 2L NiCd conversion
2-500RSx4/NR-4C/FBC-2A
\$79.95

FBPK-5 Receiver NiCd Combo
NR-4I/FBC-5B
\$59.95

FBPK-10B Combo pack
For 2NL/Attack
NT-8J/NR-4QB/FBC-8B(4)
\$75.95

FBPK-11B Combo pack
For 2PKA/Magnum Jr.
NT-8LP/NR-4QB/FBC-8B(4)
\$75.95

TRANSMITTER NiCds

NT-8C FN-Series, 2E (27MHz) and 2F systems
Transmitter NiCd
9.6v/500mAh
\$36.95

NT-8PBU Magnum 3PG
Transmitter NiCd
9.6v/500mAh
\$49.95

NT-8H PCM, J and G series
Transmitter NiCd
9.6v/500mAh
\$36.95

NT-8LP 2PKA, 2PD, 3PB, 5UA/F/P, 7UAF/P and 7UHF/P
Transmitter NiCd
9.6v/500mAh
\$36.95

NT-8J 2NL Attack
Transmitter NiCd
9.6v/500mAh
\$36.95

2-500RS 2L and 4L
Transmitter NiCd sticks
(requires 4)
2-AA NiCds/2.4v/500mAh
\$9.95

NT-10 2E (72 and 75MHz)
Transmitter NiCd
12v/500mAh
\$59.95

NT-8JY 4NBL, 4NBF and 4NBP
9.6v/500mAh
\$44.95

NT-81B 9VA, 9VH, 6NPK and 6NFK
9.6v/500mAh
\$44.95

NT-8R 2PBKA and 2PB
Transmitter NiCd
9.6v/500mAh
\$49.95

CHARGERS

FBC-1 Receiver NiCd charger
4.8v/45mA
\$15.95

FBC-2A Dual charger (110v)
4.8v/45mA and 9.6v/45mA
\$24.95

FBC-2B Dual charger (110v)
4.8v/45mA and 12v/45mA
\$24.95

FBC-2L Dual charger
J-connectors
4.8v/45mA and 9.6v/45mA
\$24.95

FBC-5B Receiver NiCd charger
For NR-4IM (NR-4I)
4.8v/100mA
\$17.95

FBC-6B (2) Dual charger
for 9VH system.
9.6v/50mAh and 4.8v/100mAh
\$29.95

FBC-6B (4) Dual charger
7UHF/7UHP
9.6v/50mAh and 4.8v/100mAh
\$29.95

FBC-8B (1) Dual charger
G-Series AM systems, 3EGX,
4L and (2NL/2PKA)
(NiCd conversions)
Rx standard mini/Tx power plug
4.8v/45mA and 9.6v/45mA
\$19.95

FBC-8B (2) Dual charger
PCM/J-Series systems and 3PG
Rx J-Series/Tx DIN plug
4.8v/45mA and 9.6v/45mA
\$19.95

FBC-8B (3) Dual charger
2E and 2F NiCd conversions
Rx standard mini/Tx standard mini
4.8v/45mA and 9.6v/45mA
\$19.95

FBC-8B (4) Dual charger
G-Series FM systems 2NL/2PKA
Rx J-Series/Tx power plug
4.8v/45mA and 9.6v/45mA
\$19.95

GENUINE FUTABA PARTS

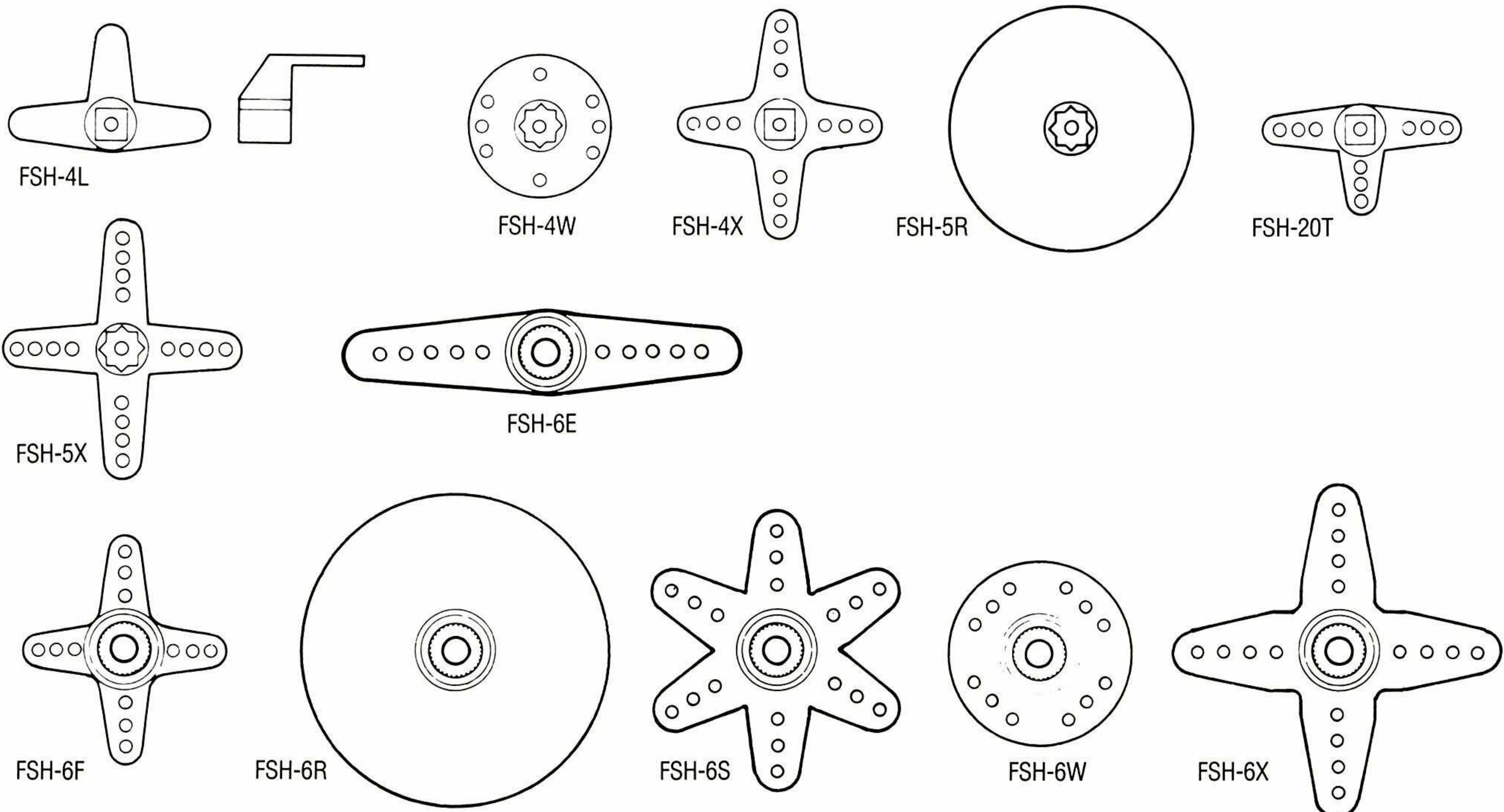
SERVO HORNS

SERVO GEAR SETS

SERVO CASE SETS

DESCRIPTION	PART #	RETAIL	DESCRIPTION	PART #	RETAIL	DESCRIPTION	PART #	RETAIL
L-shaped	FSH-4L	1.75	S6/S17/S18	FGS-6	2.50	S6	FCS-6	3.75
Small wheel	FSH-4W	1.75	S7/S12/S107	FGS-7	2.50	S7/S8	FCS-7	3.75
X-shaped	FSH-4X	1.75	S8	FGS-8	2.50	S10/S14	FCS-10	8.00
White disc	FSH-5R	1.75	S10	FGS-10	42.50	S11	FCS-11	3.75
X-shaped large	FSH-5X	1.75	S11	FGS-11	3.75	S12	FCS-12	3.75
			S14	FGS-14	48.50	S15/S15G	FCS-15	4.75
(Above fit all servos except (S10, S14, S20, S25)			S15	FGS-15	3.75	S16	FCS-16	3.75
			S15G	FGS-15G	3.75	S16G	FCS-16G	6.00
			S16	FGS-16	3.00	S17/S18	FCS-17	3.75
Splined Horn A X-shaped	FSH-6X	1.75	S16G	FGS-16G	3.00	S20	FCS-20	3.75
Splined Horn B star	FSH-6S	1.75	S20	FGS-20	3.75	S21/S121		
Splined Horn C disc	FSH-6R	1.75	S21/S121	FGS-21	3.75	S21G	FCS-21	3.75
Splined Horn D wheel	FSH-6W	1.75	S21G/S121G	FGS-21G	5.00	S22	FCS-22	3.75
Splined Horn E long arm	FSH-6E	1.75	S22	FGS-22	2.50	S23	FCS-23	3.75
Splined Horn F small X	FSH-6F	1.75	S23	FGS-23	2.50	S24/S124	FCS-24	3.75
			S24/S124	FGS-24	2.50	S25	FCS-25	3.75
(Above fit servos S28, S29, S30, S31, S32, S38, S48)			S24H	FGS-24H	3.75	S26	FCS-26	3.75
			S25	FGS-25	4.25	S26G/S126G	FCS-26G	3.75
			S26	FGS-26	2.50	S27	FCS-27	3.75
			S26G	FGS-26G	4.25	S28/S128	FCS-28	3.75
S20 T-shaped	FSH-20T	1.75	S27	FGS-27	2.50	S29/S129	FCS-29	3.75
S14 T-shaped	FSH-14T	2.00	S28/128	FGS-28	3.75	S30/S130/S5101	FCS-30	3.75
S25 Sail arm H	FSH-25H	4.50	S29/S129	FGS-29	3.75	S30G	FCS-30G	3.75
			S30/S130/S5101	FGS-30	3.75	S31S/S131S/ S9201/S9301	FCS-31S	3.75
			S30G	FGS-30G	4.25	S32/S32H	FCS-32	3.75
			S31S/S131S/ S9201/S9301	FGS-31S	3.75	S33	FCS-33	3.75
			S31SH/S131SH	FGS-31SH	3.75	S34	FCS-34	3.75
			S32	FGS-32	3.75	S35/S135/S9601	FCS-35	3.75
			S32H	FGS-32H	3.75	S36/S136	FCS-36	3.75
			S33	FGS-33	4.25	S38/S138	FCS-38	3.75
			S33H	FGS-33H	4.25	S48/S148	FCS-48	3.75
			S34/S34G	FGS-34	3.75			
			S35S/S9601	FGS-35S	4.95			
			S36G	FGS-36G	14.95			
			S38/S138	FGS-38	3.50			
			S48/S148	FGS-48	3.75			
			S9101	FGS-9101	3.75			

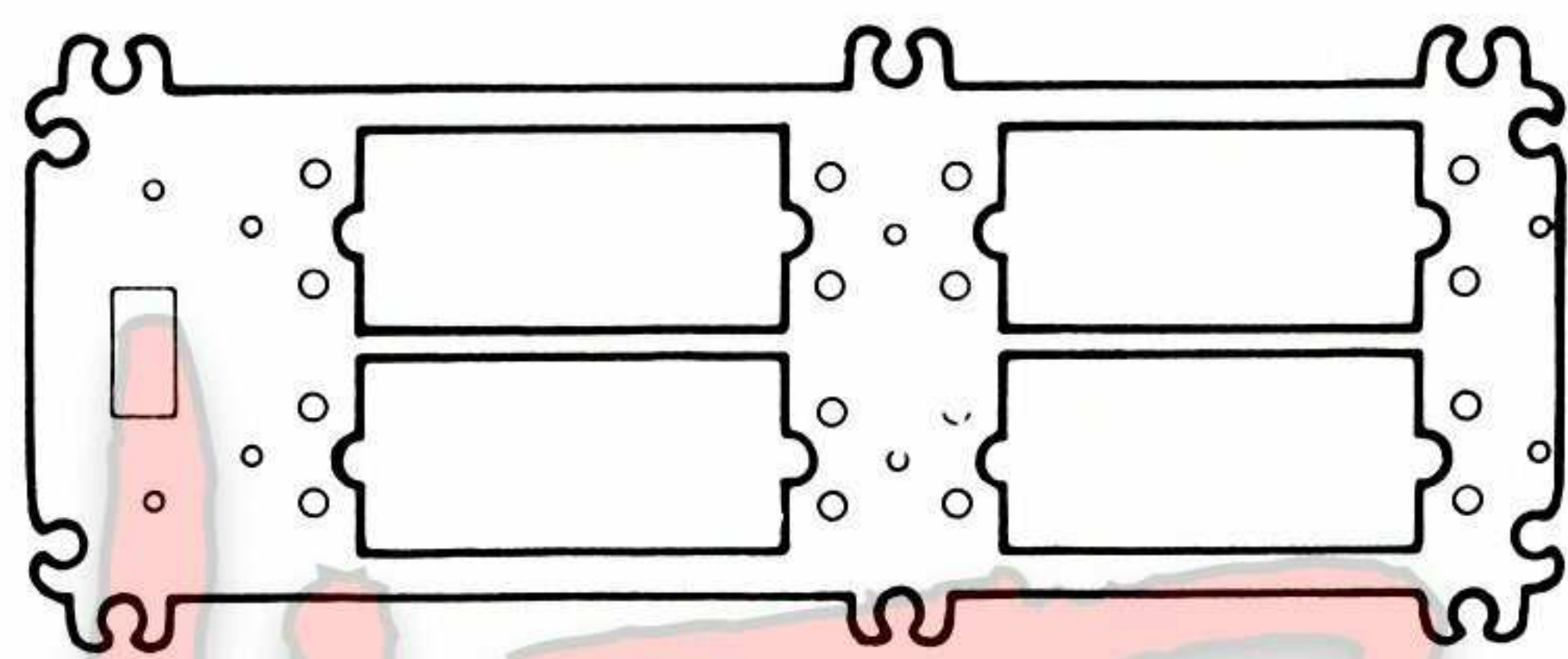
SERVO HORNS (Shown actual size)



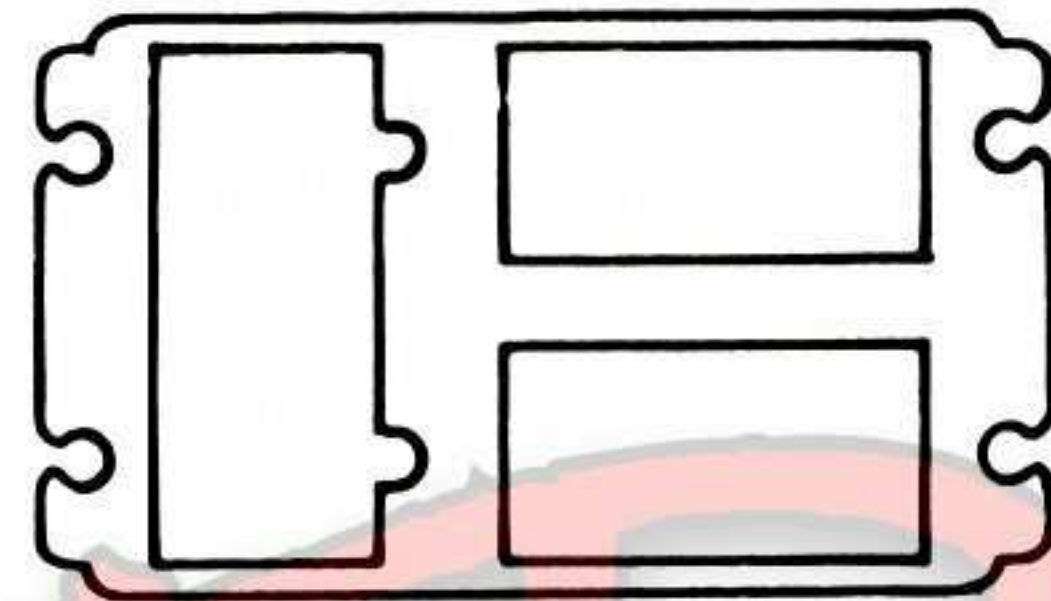
GENUINE FUTABA PARTS

SERVO TRAYS

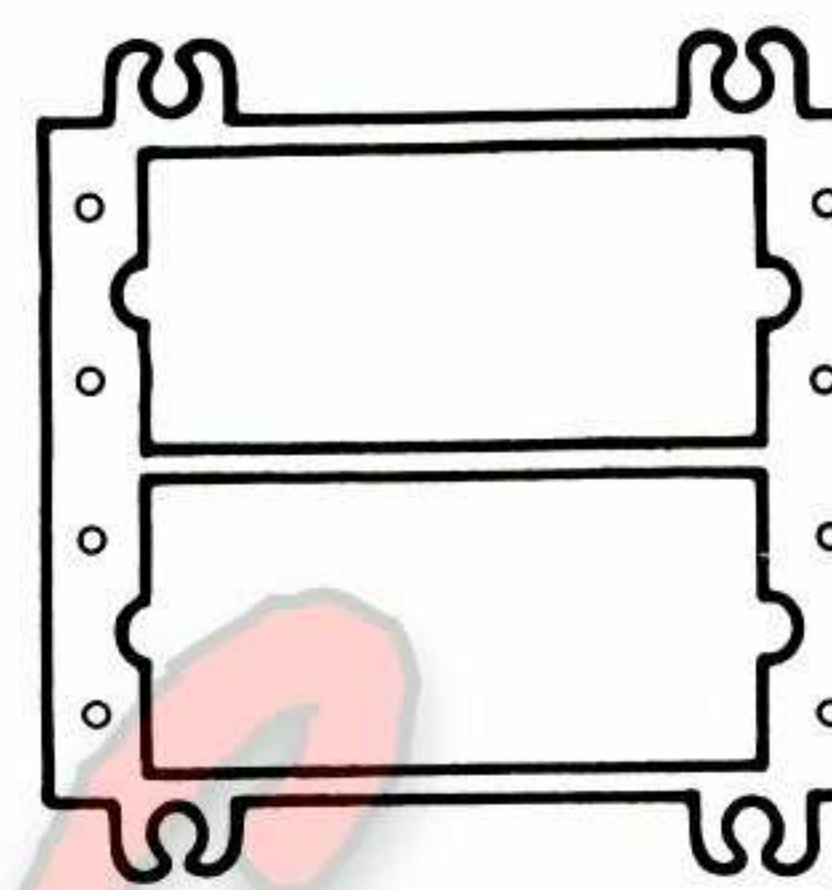
DESCRIPTION	PART #	RETAIL	DESCRIPTION	PART #	RETAIL	DESCRIPTION	PART #	RETAIL
Single/Vertical/S7, S12, S22, S24, S124, S25, S27, S29	FST-4V	2.75	2 + 1/S16	FST-16T	3.75	2 + 1/S21, S121	FST-21T	3.75
Single/Vertical/S11	FST-11V	2.75	Single/Vertical/S16	FST-16V	2.75	S121H, S30		
2-by-2/S15	FST-15A	4.00	Side-by-Side/S17, S18	FST-17A	3.25	Single/Vertical/S21	FST-21V	2.75
Side-by-Side	FST-15B	3.25	S23, S26			S121, S121H		
Single/Vertical/S15V	FST-15V	2.75	Single/Vertical & Horizontal/S17, S18, S23, S26	FST-17B	3.25	except S30	FST-28A	4.00
2-by-2/S16A	FST-16A	3.75	2 + 1/S17, S18, S23, S26	FST-17T	3.75	2-by-2/S28, S31S, S38, S48	FST-28T	3.75
Single/Vertical & Horizontal/S16	FST-16B	2.75	Single/Horizontal/S20	FST-20H	2.75	2 + 1/S28, S31S, S38, S48	FST-28V	2.75
			2 + 1/S20	FST-20T	3.75	Single/Vertical/S28	FST-30V	2.75
			Single/Vertical/S20	FST-20V	2.75	S31S, S38, S48		
			2-by-2/S21, S121, S121H, S30	FST-21A	4.00	Single/Vertical/S30, S32		



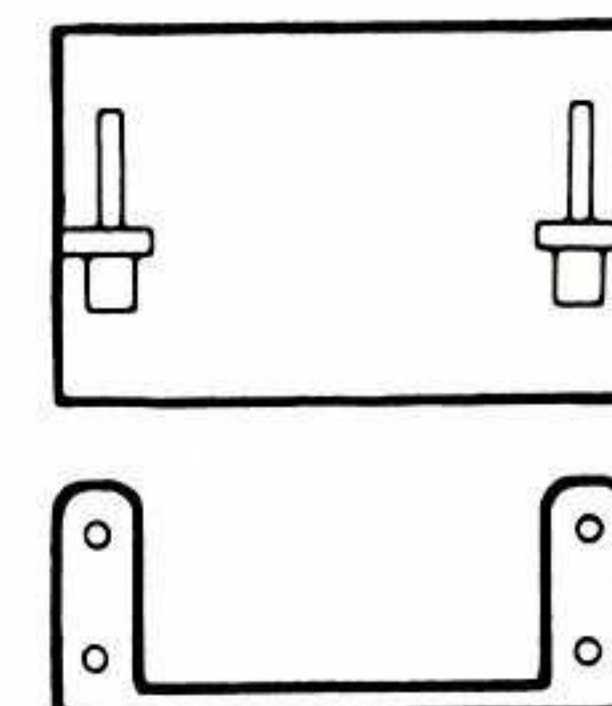
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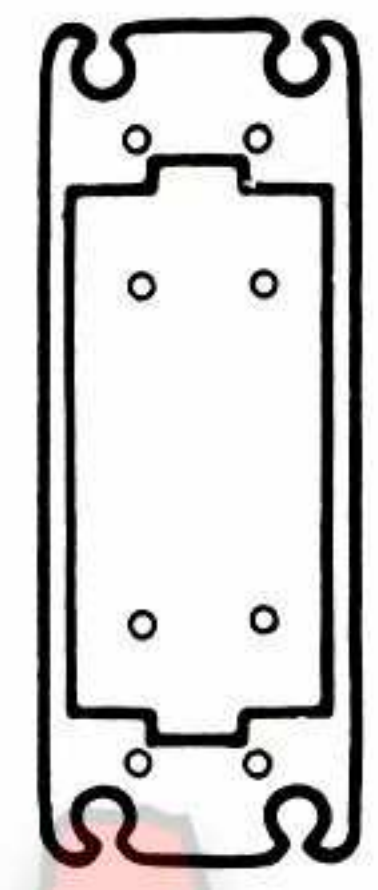
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Side-by-Side



Single/Horizontal



Single/Vertical

TRANSMITTER ANTENNAS

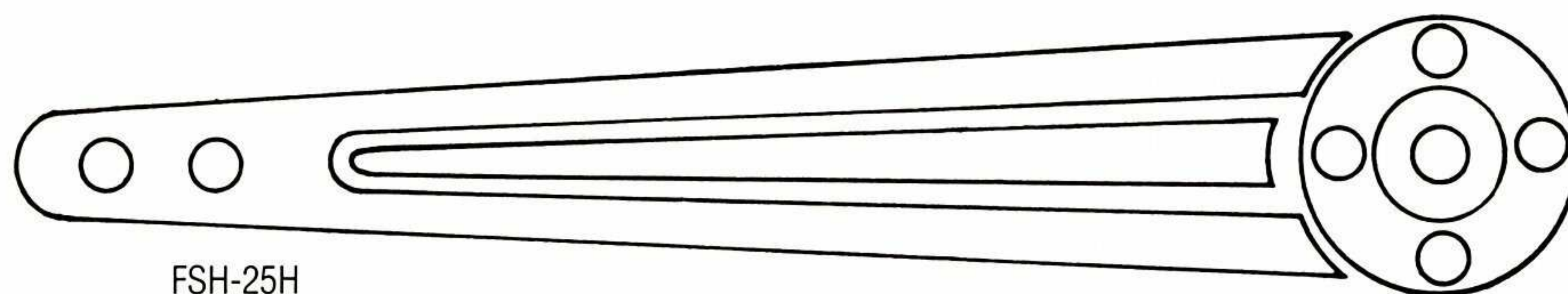
DESCRIPTION	PART #	RETAIL
FN-Series TX Antenna	ANT-1	8.00
T2F Antenna	ANT-2	8.00
T2GS Antenna	ANT-3	7.00
T2GA Antenna	ANT-4	7.00
T2L/2NL/2NCS/2PB 2PKA/2PD/2PKA/3PB 4NBL/4NBF/4NBP Antenna	ANT-5	7.00
T4L/5LK/6NPK/6NFK Antenna	ANT-6	7.00
J-Series Antenna	ANT-7	7.25
G-Series Antenna	ANT-8	7.25
T3PG Antenna (short) 27MHz	ANT-9	10.50
T3PG (short) 72/75 MHz	ANT-10	11.50
T3PG Antenna (long) All freq.	ANT-11	7.25
T9VA/9VH/8SSA/8SSH 7UAF/7UAP/7UHF/7UHP 5UA/5UAF/5UAP	ANT-12	7.25

ACCESSORIES

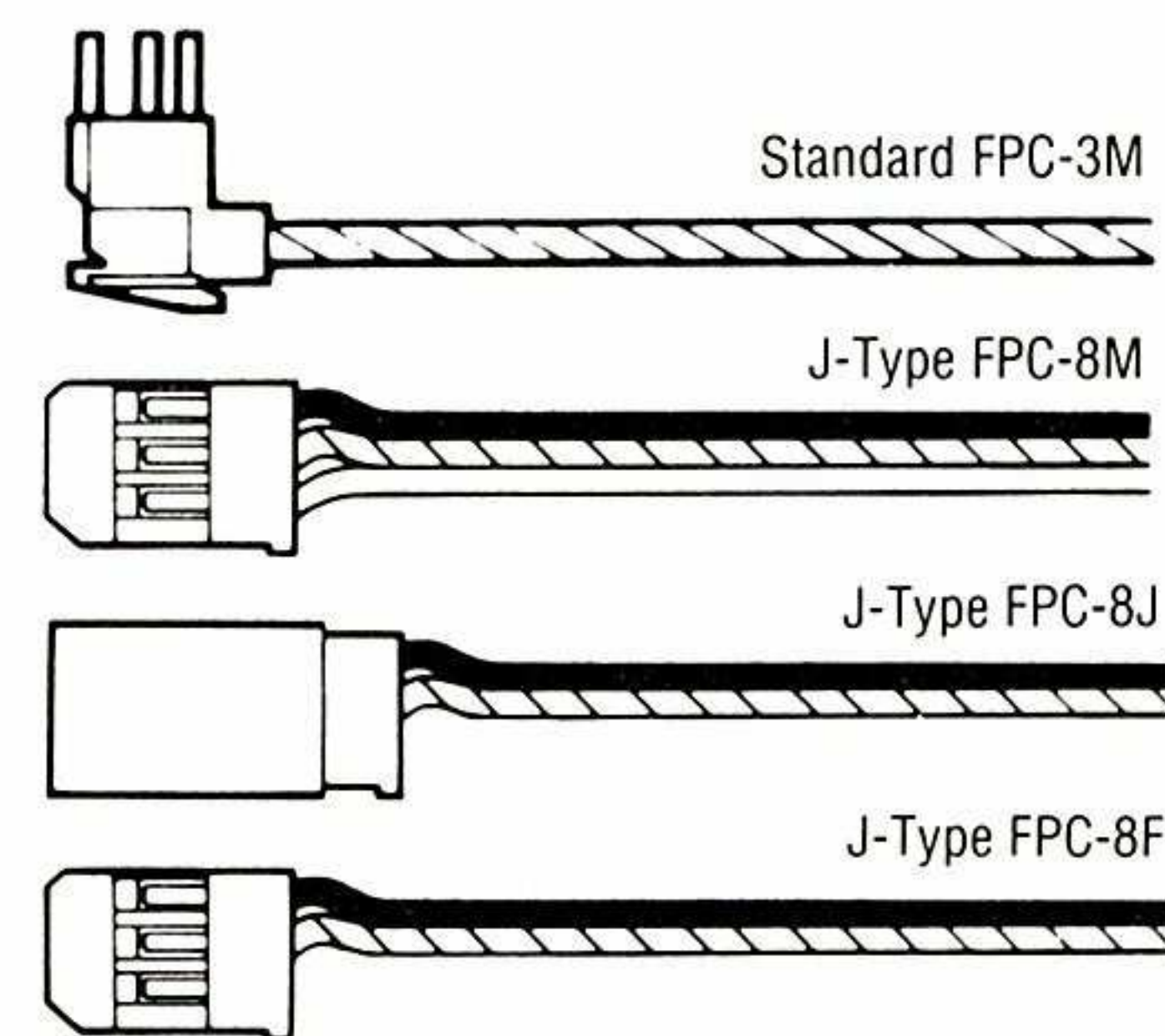
DESCRIPTION	PART #	RETAIL
T4L Shiftgate	FTA-1	2.25
PCM Screwdriver	FTA-2	3.75
T3PG Hand Strap	FTA-3	7.50
G-Series Neck Strap	FTA-4	8.50
FP-4NL Shiftgate	FTA-5	2.25
Clip-on Screwdriver	FTA-6	.95
Dry Cell Holder w/BEC plug	FBB-1	2.95
3PB/2PD Hand Strap	FTA-7	9.00
9VA/9VH Neck Strap	FTA-8	14.00

MINI CONNECTORS

DESCRIPTION	PART #	RETAIL
NR-4C Connector	FPC-3F	4.50
Servo Connector	FPC-3M	4.00
NR-4C/Servo Connector Set	FPC-3MF	7.50
FP-7G Connector Set	FPC-7	4.00
J-Type Nicd Conn.	FPC-8F	4.00
J-Type Female	FPC-8J	4.50
J-Type Servo Conn.	FPC-8M	4.00
J-Type Connectors (Nicd/Servo)	FPC-8MF	7.50



FSH-25H



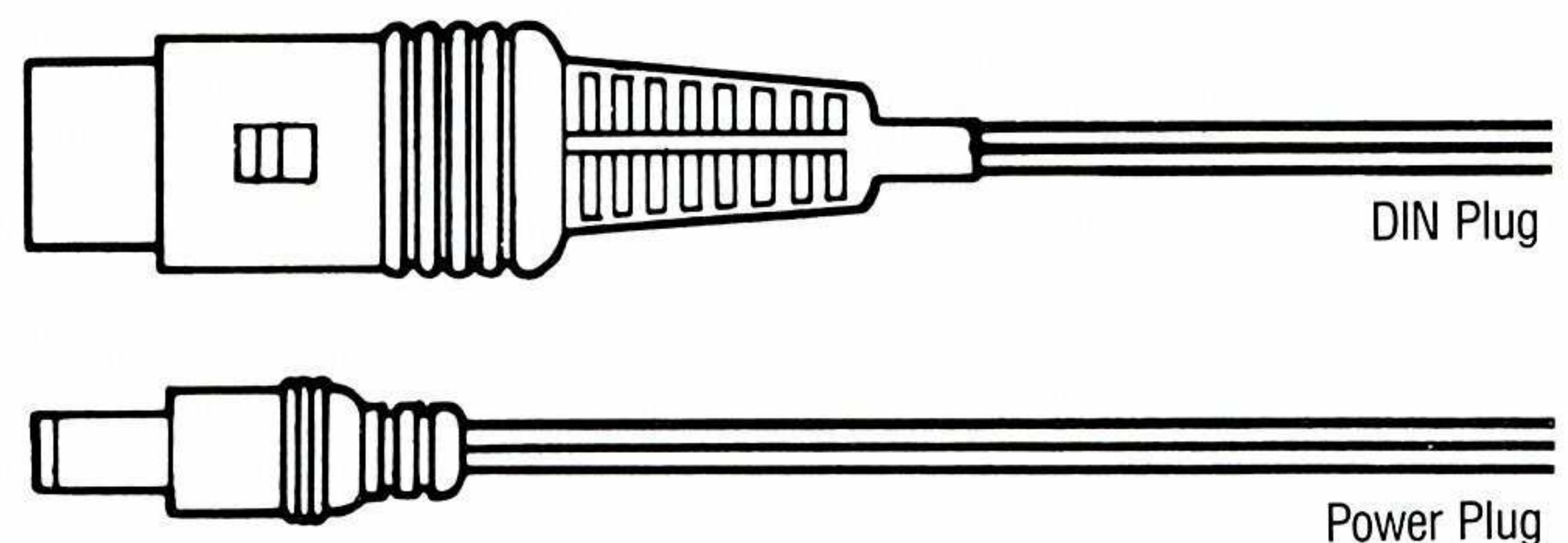
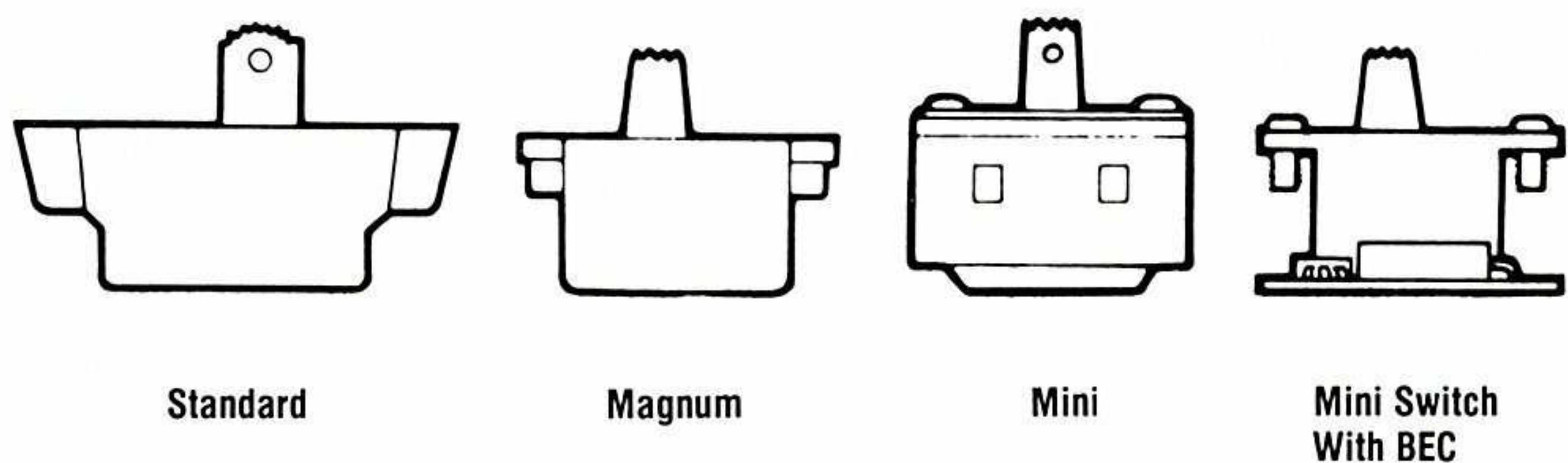
NOTE: The term "J-TYPE" designates components which use 1520 μ Sec. neutral position and connectors which were first introduced with the J-Type. Standard Series use 1310 μ Sec. neutral and Futaba mini 3 pin connectors.

GENUINE FUTABA PARTS

SWITCH HARNESSES / CHARGE CORDS

EXTENSION CORDS

DESCRIPTION		PART #	RETAIL	DESCRIPTION		PART #	RETAIL
Switch Harness with charge cord		SWH-1	9.50	Rx External Charge Jack		NCC-6	10.00
Switch Harness without charge cord		SWH-2	9.00	8 Ch. PCM DSC/ Charge Adaptor		NCC-8	10.00
Contest 7 Switch Harness		SWH-4	9.00	9VA/9VH PCM, DSC/Charge Adaptor		NCC-9	10.00
J-Type Switch Harness		SWH-5	10.00	3PB DSC cord		NCC-10	6.00
Harness with Receiver Dry Battery Holder		SWH-6	9.50	Aileron Extension Cord		AEC-1	6.75
J-Connector Mini Switch Harness		SWH-7	9.50	Dual Servo Extension		AEC-2	8.50
Mini Switch Harness with charge cord		SWH-8	9.50	J-Type Aileron Extension		AEC-3	6.75
J-Mini Switch Harness with charge cord		SWH-9	9.50	J-Type Dual Servo Extension		AEC-4	13.00
Mini Switch with BEC Connector		SWH-10	10.00	Servo Adaptor J-Type to Standard		AEC-9	6.00
J-Mini Switch with BEC Connector		SWH-11	10.00	Servo Adaptor Standard to J-Type		AEC-10	6.00
J-Mini Switch with 2-Pin Connector		SWH-12	9.50	J-Extension, 16" cord		AEC-11	7.25
Transmitter Charge Cord		NCC-1	5.00	J-Extension, 1 meter cord		AEC-12	8.00
Receiver Charge Cord		NCC-2	6.75	J-Type Direct Servo Cord		FSC-1	8.50
J-Type Transmitter Charge Cord		NCC-3	6.75				
J-Type Receiver Charge Cord		NCC-4	6.75				



RC GLOSSARY

PCM/Pulse Code Modulation

PCM is the most advanced form of radio signal transmission available for radio controlled models. First introduced to American hobbyists by Futaba, PCM uses digitally encoded signals to reduce interference. PCM 1024 is Futaba's exclusive, second generation system, which offers the ultimate in servo resolution and response.

FM/Frequency Modulation

FM systems vary the frequency of the signal wave for improved resistance to interference.

AM/Amplitude Modulation

AM systems, most commonly used for surface models, use this radio signal system which varies signal amplitude.

Dual Rate

Dual rates are used to electronically reduce servo throw with full control stick or wheel throw.

Exponential

Exponential rates provide non-linear servo response and are used to reduce servo sensitivity close to neutral without reducing throw.

Trainer System

Futaba trainer systems let two transmitters to be linked with an optional trainer cord, allowing an instructor to take over control at the flick of a switch. (New 4FG/6FG are trainer compatible with J-Series mini connector systems. Older 4FG and 6FG systems with standard mini connectors are not compatible.)

NiCd/Nickel Cadmium

Rechargeable Nickel Cadmium power packs are standard equipment in many Futaba systems and are available as an optional accessory for most others.

ATV/Adjustable Travel Volume

Frequently referred to as end point adjustment, ATV lets you preset the maximum travel of a servo either side of neutral.

AFR/Adjustable Function Rate

Similar to ATV, AFR allows end point adjustment independent of dual rate or exponential settings.

DSC/Direct Servo Controller

Using the DSC feature you can operate the servos in your system without transmitter power. This is ideal for field or pit checking your radio while others are operating on the same frequency.

Mixing

Mixing allows the simultaneous operation of two or more servos with one control input.

Please respect the FCC regulations regarding band use. Surface models are only to be operated on approved 27 and 75MHz frequencies, aircraft only on 50, 53 and 72MHz.



ONE YEAR 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 any unit which has been improperly installed, handled, abused, 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 also have other rights which vary from state to state. Batteries and plastic housings are not covered by warranty.

THIS WARRANTY APPLIES ONLY TO SYSTEMS PURCHASED AND USED IN THE CONTINENTAL UNITED STATES, HAWAII AND ALASKA. EFFECTIVE NOVEMBER 1, 1989.



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