

Radio Control Accessories

Airplanes • Boats • Cars
Airtronics • Futaba • Hitec • JR
AM • FM • PCM

*The Finest Quality
Radio Control Electronics*

"DESIGNED by R/C ENTHUSIASTS for R/C ENTHUSIASTS"

Made in the U.S.A.

Catalog No. 2001A

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PRECISIONMICROELECTRONICS is run by modelers who are dedicated to producing the world's finest radio control accessories. We build products that we need ourselves and design them with features we feel are important. We make our products available to others only after we have tested these products personally—in our own models. Designed, built, and tested by modelers for modelers is **PRECISIONMICROELECTRONICS**.

We subject each unit to a rigorous multipoint testing program. Our testing begins with individual components and ends with the finished product. Every unit which passes inspection receives a blue dot bearing the mark of the technician who tested it. The blue dot is your assurance that your unit has passed its function test perfectly.

At **PRECISIONMICROELECTRONICS**, technical writers have spent countless hours producing our manuals and instructions. We have spared no effort in creating easy-to-read manuals which thoroughly explain our products and how to use them. We realize that not every modeler has a degree in electrical engineering. Our manuals are filled with plain language and easy to follow diagrams. However, if you happen to find yourself unsure about what to do next or feel the need for clarification, please give us a call. Let one of our friendly, knowledgeable customer service representatives talk you through your problem. Remember, we are modelers too, and we understand your R/C problems.

All **PRECISIONMICROELECTRONICS** products are new, fully assembled and tested, ready for setup and installation. Our products are well engineered and we stand behind every unit with our *Limited Warranty*. **PRECISIONMICROELECTRONICS** would like the opportunity to become your supplier of affordable, quality, radio control accessories. Give us a try; we are confident you will be pleased with our products. We guarantee your satisfaction.

Extras

Accessory Extras. Due to the variety of models, radio systems, installation requirements, and customer preferences, most **PME** products are sold without certain types of accessory parts. Items such as batteries, connectors, glow plug clips, and wire, are normally supplied by the purchaser. However, as a consequence of our commitment to *Total Customer Satisfaction*, we will offer our customers as many of these accessory items as we can. While we make every effort to keep all accessory items in stock, we cannot guarantee all products will be available at all times. These items are offered as a courtesy to our customers and **PME** reserves the right to limit purchase quantities on Accessory Extras.

Service Extras. **PME** technicians will be happy to assemble[†] system components. Assembly is usually available at no charge provided the component parts are purchased from **PME**. Other electronic work is available at our standard labor rate. *Radio connectors* purchased from **PME** are always installed by factory technicians at no extra charge.

[†]System assembly by **PME** may not be 100% complete due to installation requirements and other unknowns.

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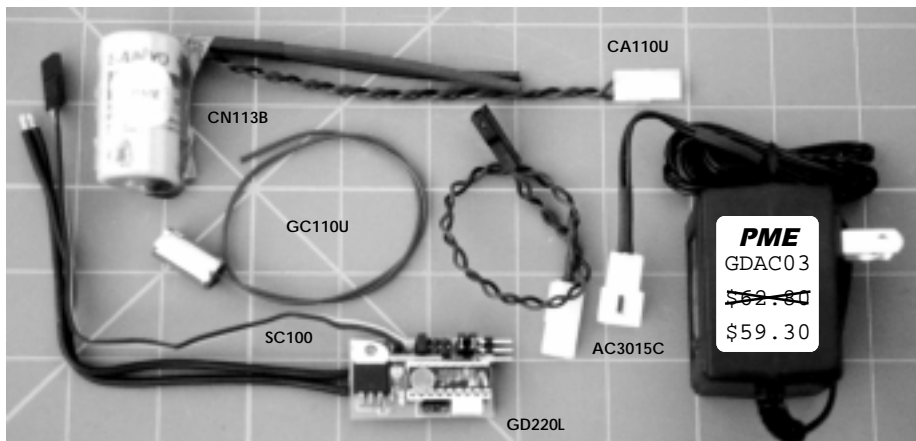
COMBOS AND PACKAGES



GDAC01 Deluxe GlowDriver™ System ▲

This complete package provides you with everything you need for single plug applications. The glow battery comes prewired with power and charging leads. A thru-fuselage charging receptacle and AC charger round out this Deluxe GlowDriver System. Combo package includes: 1 - GD210A GlowDriver, fully assembled and tested; 1 - SC100 radio connector for Airtronics, Futaba, Hitec or JR, installed by the factory; 1 - GC100U scale or GC110 standard glowplug clip; 1 - CN113B 1300mAh rechargeable NiCad glow battery, prewired with power leads; 1 - CA210U Chargelt-2 BatteryCharge Connector, prewired with glow battery; 1 - CA230U Chargelt-2 Fuselage Receptacle, for easy thru-fuselage glow battery charging; 1 - AC3015C 1.5-Volt AC Charger for overnite charging of your glow system battery. Extra cost options include a higher capacity battery (page 19), and a second GlowClip for twin-cylinder or two engine applications (page 19).

GDAC01 Deluxe GlowDriver™ System **SAVE \$4.00** \$69.85 value for \$65.85



GDLC03 Deluxe GlowDriver™ System for Gas Cars & Trucks ▲

Similar to our GDAC01 Combo except for gas-powered cars and trucks. Combo package includes: 1 - GD220L GlowDriver for Cars, fully assembled and tested; 1 - SC100 radio connector for Airtronics, Futaba, Hitec or JR, installed by the factory; 1 - GC110U Standard GlowClip; 1 - CN113B 1300mAh rechargeable NiCad glow battery, prewired with power leads; 1 - CA110U Chargelt BatteryCharge Connector, prewired with glow battery; 1 - AC3015C 1.5-Volt AC Charger for overnite charging of your glow system battery.

GDLC03 Deluxe GlowDriver™ System for Cars **SAVE \$3.50** \$62.80 value for \$59.30

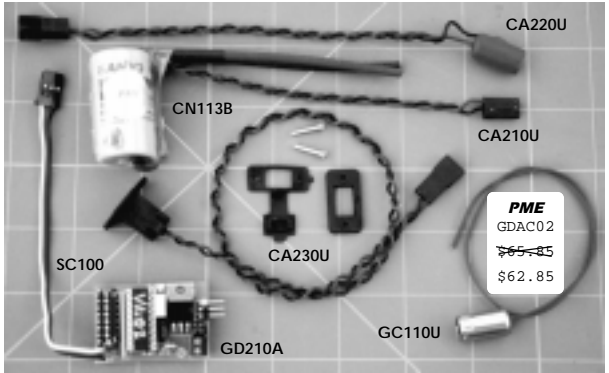
GDMC05 Deluxe GlowDriver™ System for Gas Boats

Same as our GDAC03 Combo except for gas-powered boats.

GDMC05 Deluxe GlowDriver™ System for Boats **SAVE \$3.50** \$62.80 value for \$59.30

GDAC02 GlowDriver™ System ▼

If you already have a rechargeable glow starter charger, this package gives you everything you need—including a simple “twist on” charger adapter for easy glow battery charging. The glow battery comes prewired with power and charging leads. A thru-fuselage charging receptacle completes this complete GlowDriver System. Combo package includes: 1 - GD210A Glow Driver, fully assembled and tested; 1 - SC100 radio connector for Airtronics, Futaba, Hitec or JR, installed by the factory; 1 - GC110U Standard GlowClip; 1 - CN113B 1300mAh rechargeable NiCad glow battery, prewired with power leads; 1 - CA210U Charget-2 BatteryCharge Connector, prewired with glow battery; 1 - CA220U Charget-2 ChargerAdapter; 1 - CA230U Charget-2 Fuselage Receptacle, for easy thru-fuselage glow battery charging.



Extra cost options include a higher capacity battery (page 19), and a second GlowClip for twin-cylinder or two engine applications (page19).

GDAC02 GlowDriver™ System SAVE \$3.00 \$65.85 value for \$62.85

GDLC04 GlowDriver™ System for Gas Cars & Trucks

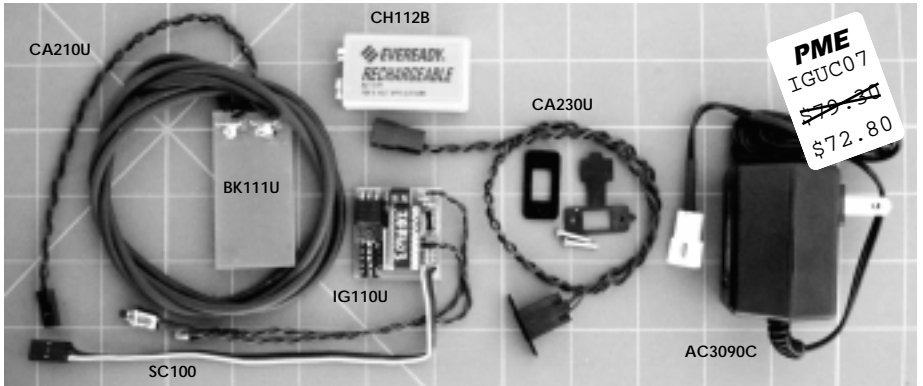
If you have a glow starter charger, this package gives you all the pieces—including a simple “twist on” charger adapter for easy glow battery charging. Combo includes: 1 - GD220L GlowDriver, fully assembled and tested; 1 - SC100 radio connector for Airtronics, Futaba, Hitec or JR, installed by the factory; 1 - GC110U Standard GlowClip; 1 - CN113B 1300mAh rechargeable NiCad glow battery, prewired with power leads; 1 - CA110U Charget-I BatteryCharge Connector, prewired with glow battery; 1 - CA220U Charget-I ChargerAdapter. A higher-capacity battery is available as an extra cost option.

GDLC04 GlowDriver™ System for Gas Cars & Trucks SAVE \$2.50 \$58.80 value for \$56.30

GDMC06 GlowDriver™ System for Gas Boats

Same as our GDAC04 Combo except for gas-powered boats.

GDMC06 GlowDriver™ System for Gas Boats SAVE \$2.50 \$58.80 value for \$56.30

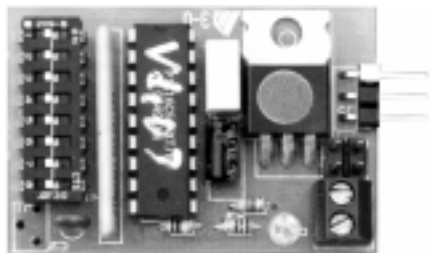


IGUC07 IgnitionUnit™ System for Rocket Powered Models ▲

A complete on board ignition system for rocket powered radio control models. Combo package includes: 1 - IG110U IgnitionUnit, fully assembled and tested; 1 - SC100 radio connector for Airtronics, Futaba, Hitec or JR, installed by the factory; 1 - BK111U Single Cell IgnitionPowerUnit; 1 - CH122B 110mAh rechargeable NiCad PowerCell, for the IPU; 1 - CA210U Charget-II BatteryCharge Connector; 1 - CA230U Charget-II FuselageReceptacle, for easy thru-fuselage charging; 1 - AC3090C 9-Volt AC Charger for recharging your ignition PowerCell.

IGUC07 IgnitionUnit™ System for Rocket Powered Models SAVE \$4.50 \$79.30 value for \$72.80

GlowDriver™ for Airplanes



Special
High Current
Multi-Cylinder
Version
Available

- ✓ Reliable
- ✓ 100% electronic
- ✓ Drives singles and twins
- ✓ Turns OFF when transmitter is OFF

GD210A GlowDriver™ for Airplanes

Are you tormented by cantankerous engines? Frustrated with inverted engines which refuse to idle smoothly or die on you unexpectedly? Does the idea of having to reach around a spinning prop to remove the glow-starter from a running engine give you the chills? If so, the **PRECISIONMICROELECTRONICS** GD210A GlowDriver for Airplanes may be for you. An on-board glow driver system will heat your airplane's glow plug just when your engine needs it the most—during starting, idling, and low throttle settings.

With the GlowDriver, you will never have to cobble together one of those mechanical "switch-type" systems. Mechanical systems just complicate your throttle linkage. With the GD210A GlowDriver everything is simple and easy. All you have to do is install the throttle servo and linkage in the way which best suits your model, then let the GlowDriver do the rest. The secret of the GlowDriver is a tiny microcomputer which has been programmed to control a powerful FET transistor which replaces those mechanical relays and switches. The GD210A features eight different on points, eight different off points, function reversing, a LED indicator to help with setup, and a safety mechanism that turns the glow system off when your transmitter is off. The GlowDriver simply connects between the throttle servo and the receiver. The GD210A is programmed to turn on after a certain amount of *throttle trim* has been given (13%, 25%, 38%, 50%, 63%, 75%, 88%, or 100%), and to turn off after the *throttle stick* has been advanced a particular amount (31%, 38%, 44%, 50%, 56%, 63%, 69%, or 75%). Reversing and the on and off points are set with simple dip switches. The GD210A GlowDriver can easily drive two glow plugs so controlling twin-cylinder and two-engine models is a snap.

The GlowDriver is designed to work with AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo. The GD210A comes with wire to connect the GlowDriver, battery, and glow plug clip.

Accessories Required:

The GD210A GlowDriver requires one male radio connector, a 1.2 volt NiCad cell, and one locking glow plug clip for each glow plug being driven. **PME** recommends at least 1000 mAh of battery capacity for each plug driven. If driving two glow plugs, additional wire may be required. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.7" x 1.2" x 0.4" or (cm): 4.3 x 3 x 1; Wt: 0.4 oz (11 gm); Power Consumption: ≈ 2-25 mA.

GD211A High-Current GlowDriver™

PRECISIONMICROELECTRONICS also offers the GD211A GlowDriver which is a special, high current version of the GD210A. The GD211A is specifically designed to drive three, four, and five-cylinder engines.

Accessories Required:

The GD211A GlowDriver requires one male radio connector, one locking glow plug clip for each glow plug being driven, and heavy-duty wire. Also required is one or more 1.2 volt NiCad cells. **PME** suggests at least 1000 mAh of battery capacity for each plug driven. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.7" x 1.2" x 0.4" or (cm): 4.3 x 3 x 1; Wt: 0.4 oz (11 gm); Power Consumption: ≈ 2-25 mA.

SR502U Dual-Output ServoReverser™



Do you have an older radio and need the ability to reverse the direction of a servo? The **PRECISIONMICROELECTRONICS** SR502U Dual-Output ServoReverser is a small, light weight unit which can help you. Perhaps you have a split elevator, two-servo ailerons, or double-servo rudder installation and need one servo normal and the other reversed, the Dual-Output ServoReverser is definitely for you. The SR502U Dual-Output ServoReverser simply plugs into the receiver channel and instantly provides access to that channel's normal and

reversed signal without the use of an expensive Y-harness. Just connect the servo you want reversed to the reversed output pins, and the normal servo to the normal output pins. Nothing to set, nothing to worry with—just plug it in and forget it.

The SR502U Dual-Output ServoReverser offers a simple solution for applications requiring both normal and reversed signal. Simplicity is the keyword. The SR502U is microprocessor controlled and is designed to work with all modern AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo.

Accessories Required:

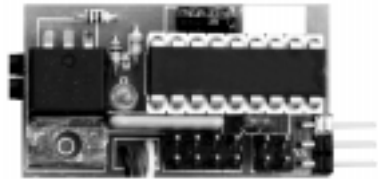
The Dual-Output ServoReverser requires one male radio connector. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.6" x 0.9" x 0.4" or (cm): 4 x 2.3 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 5 mA

AS710U Low-Current AccessorySwitch™

Sometimes you need to control lights, motors, or some other sort of electrical accessory. If you have a small electrical device you need to switch on and off, the **PRECISIONMICROELECTRONICS** AS710U AccessorySwitch could be for you. The AccessorySwitch gives you the ability to turn on and off your accessory with any channel without sacrificing that channel's ability to control a proportional servo. With the AS710U AccessorySwitch, you will never have to piece together a switch-based mechanical system to control your electrical device. The AS710U AccessorySwitch makes everything simple and easy. The AS710U is designed to supply your accessory with power from any source you choose with a maximum continuous power dissipation of about 12 watts.



Controlling the AccessorySwitch is a tiny microcomputer which has been programmed to operate an efficient FET transistor. The AS710U AccessorySwitch features function reversing, eight different switching points (8%, 20%, 32%, 44%, 56%, 68%, 80%, 92%), a small LED indicator to help with setup, and a safety feature that turns the accessory off if your transmitter is turned off. The AS710U simply connects between the servo and receiver on the channel you pick to control your accessory. The AccessorySwitch will turn on after the channel control has been advanced past the switching point. The switching point is set with simple jumpers.

The AS710U AccessorySwitch is designed to work with all modern AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo.

The AS710U AccessorySwitch is designed to work with all modern AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo.

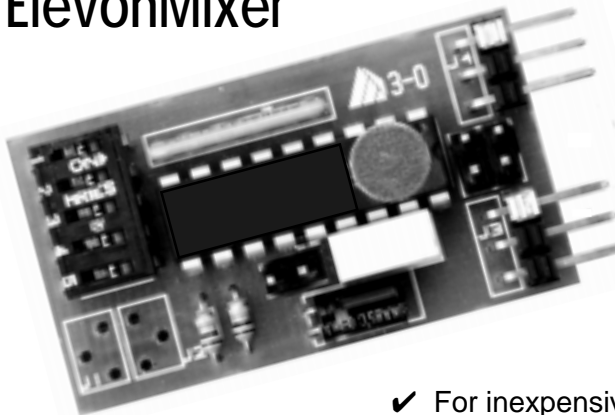
Accessories Required:

The AS710U AccessorySwitch requires one male radio connector, a power source for the accessory, and hookup wire. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.6" x 0.95" x 0.4" or (cm): 4 x 2.4 x 1; Wt: 0.35 oz (9 gm); Power Consumption: ≈ 2-25 mA

ElevonMixer™



- ✓ Servo reversing
- ✓ Quad mixing rates
- ✓ For inexpensive non-computer radios
- ✓ Mixes elevons, flaps, spoilers, and v-tails

EM310A ElevonMixer™

The **PRECISIONMICROELECTRONICS** ElevonMixer will greatly simplify installation of elevon control systems. In the past, these control schemes were implemented using a sliding tray or other complex mechanical linkage. With the ElevonMixer, simplicity is the keyword. Just install your servos in the normal manner and let the ElevonMixer do the rest.

The heart of the ElevonMixer is a tiny microcontroller which has been programmed to do electronically what other systems do mechanically. The ElevonMixer can do more than just mix the controls for elevons; it has the ability to mix v-tails, flaps, spoilers, or couple rudder with aileron to make turn coordination automatic. The ElevonMixer features two operating modes, four mixing rates for each mode, and reversing for each servo output. The different mixing rates allow you to tailor the sensitivity of the ElevonMixer to the needs of your model.

Elevon Mode is for elevons and v-tail mixing. Elevon mixing requires one servo for the left, and one servo for the right control surface; v-tail requires one servo for each side of the tail. The control surfaces move differentially (i.e. in opposite directions) as ailerons and together (moving in the same direction) as elevator. The elevon mixing rates can be set to 100%, 75%, 50% or 38%. The mixing is fully proportional (e.g. if elevons are set to 50%, the servos will move 50% with full stick movement; 25% with half stick movement; etc...) and the rate is easily selected with a simple dip switch.

Flap Mode is for flaps, spoilers, and aileron-rudder coupling. Each aileron is driven with a separate servo, and flaps and spoilers are mixed into the aileron control surfaces. As ailerons, the control surfaces operate differentially; as flaps or spoilers, the control surfaces operate together (up for spoilers, down for flaps). The flap or spoiler function is proportionally mixed into the aileron surfaces at one of four rates: 50%, 38%, 25% or 19%. In flap mode, the ailerons function at full rate; the flaps or spoilers function at the selected mixing rate.

The ElevonMixer will not overdrive your servos since the output to each servo is limited by the microcontroller to 100%—no matter what the mixing situation. All ElevonMixer modes, rates, and options are set with a dip switch. The ElevonMixer is designed to work with inexpensive "non-computer" AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo simply by setting two jumpers.

Accessories Required:

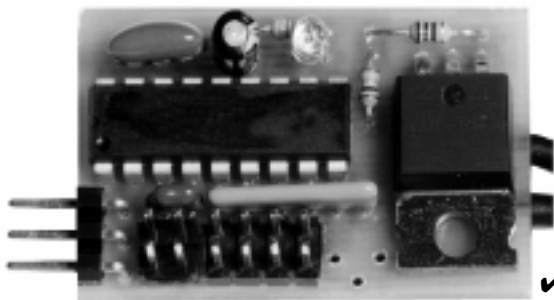
The ElevonMixer requires two male radio connectors. See the *Accessory Extras* section for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.6" x 0.9" x 0.4" or (cm): 4 x 2.3 x 1; Wt: 0.25 oz (7 gm);

Power Consumption: ≈ 5 mA

GlowDrivers™ for Gas Cars & Boats



- ✓ Simple
- ✓ 100% electronic
- ✓ Super light weight
- ✓ Extremely reliable
- ✓ Ultra-rugged design
- ✓ Microprocessor controlled

GD220L GlowDriver™ for Gas Cars

The typical R/C gas car has a small glow engine under the hood. Glow engines can be troublesome—refusing to idle smoothly or dying unexpectedly. If your engine is giving you trouble, the **PRECISIONMICROELECTRONICS** GD220L GlowDriver could help. An on-board glow driver system will heat your car's glow plug during the critical times—starting, breaking, idling, and low throttle settings; and at only 9 grams, your car will hardly notice the extra passenger.

The 100% electronic GD220L GlowDriver makes everything simple and easy. No mechanical "switch-type" systems to needlessly complicate throttle linkages. Just install your throttle servo and linkage in the manner which best suits your car and let the GD220L take care of the rest. Inside the GlowDriver is a tiny microcomputer which has been programmed to operate a powerful FET transistor. This transistor does electronically what switches and relays do for other systems. The GD220L GlowDriver features eight different user-selectable off points (31%, 38%, 44%, 50%, 56%, 63%, 69%, or 75%), function reversing, a LED indicator to help with setup, and a safety system that turns the glow system off when your transmitter is off. The GlowDriver simply connects between the throttle servo and receiver. The Glowdriver is programmed to turn on when receiver and transmitter are on and the throttle is set to minimum, and turn off after the throttle has been advanced past the off point.

The GD220L GlowDriver is designed to work with all modern radio systems. The servo output pins can quickly be configured for most servos. The glow driver is supplied with high quality wire to connect the glow driver, battery, and glow plug clip.

Accessories Required: The GD220L GlowDriver requires one male radio connector, a 1.2 volt 600-2000 mAh NiCad cell, and one locking glow plug clip. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products.

Specifications: Size (L x W x H): 1.6" x 0.95" x 0.4" or (cm): 4 x 2.4 x 1; Wt: 0.35 oz (9 gm); Power Consumption: ≈ 2-25 mA

GD230M GlowDriver™ for Gas Boats

Does your gas-powered R/C boat run fine when idling near the shore only to die on you as soon as you head out to deep water? If your marine engine is giving you trouble, the **PRECISIONMICROELECTRONICS** GD230M GlowDriver for Boats may be for you. The typical gas boat is powered by a water-cooled glow engine. Water not only cools your engine when it is hot, but it cools it when it is cool too! Cold water can kill an engine by overcooling it and putting out the fire. An on-board glow driver system will heat your boat's glow plug when it needs it most—during starting, idling, and low throttle settings.

With the GD230M GlowDriver, you will never have to piece together one of those switch-based mechanical systems. The GlowDriver makes everything simple and easy. Just install your throttle servo and linkage in the way which best suits your boat, and let the GD230M do its job. At the center of the GlowDriver is a tiny microprocessor which has been programmed to operate a powerful FET transistor. The GD230M does electronically what other systems do with switches and relays. The GD230M GlowDriver features eight different off points, function reversing, a small LED indicator to help with setup, and a safety system that turns the glow system off when your transmitter is off. Reversing and the off point are set with simple jumpers. The GlowDriver simply connects between the throttle servo and receiver. The GlowDriver turns on at about half throttle trim, and turns off after the throttle stick has been advanced past the off point.

The GD230M GlowDriver is designed to work with all modern radio systems. The servo output pins can quickly be configured for most servos. The glow driver is supplied with high quality wire to connect the glow driver, battery, and glow plug clip.

Accessories Required: The GD230M GlowDriver requires one male radio connector, a 1.2 volt 600-2000 mAh NiCad cell, and one locking glow plug clip. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products.

Specifications: Size (L x W x H): 1.6" x 0.95" x 0.4" or (cm): 4 x 2.4 x 1; Wt: 0.35 oz (9 gm); Power Consumption: ≈ 2-25 mA

IgnitionUnit™ for Rocket Powered Models



Designed for
rocket-powered
R/C gliders,
RATO, and
High-Power
Rocketry

- ✓ Ultra safe
- ✓ Extremely reliable
- ✓ Optional 5-second countdown
- ✓ Rocket motor ignition from transmitter

IG110U IgnitionUnit™ for Rocket Powered Models

Imagine an X-1 model being dropped from a carrier plane, igniting in midair, streaking across the sky under rocket power, then gliding to a smooth landing. Rocket Assisted TakeOff (RATO), midair ignition, and ignition with ROG takeoff, are all possible with the **PRECISIONMICROELECTRONICS** IG110U IgnitionUnit.

The IG110U IgnitionUnit is the most unique device made by **PRECISIONMICROELECTRONICS**. It gives the R/C modeler the ability to start rocket motors remotely. This makes RATO and other rocket powered models more realistic and safer to fly. Rocket power may seem risky or even dangerous but with the IG110U safety is paramount. Rocket motors are ignited electrically with an on-board battery using the approved igniters which are packaged with the motors.

The IG110U IgnitionUnit is a "smart" device. It is run by a small microcomputer which incorporates multiple levels of safety to prevent premature or accidental ignition of the rocket motor. The IG110U IgnitionUnit features five safety-conscious operating modes, function reversing, five-second countdown, LED mode indicator, and arming switch.

The first operating mode is the *Standby Mode*, the IgnitionUnit is on, but not receiving a signal from the transmitter; the rocket motor cannot be fired in this mode. Next is the *Zero Mode*, the unit is receiving a signal from the transmitter, but is in an unarmed state. The rocket motor cannot be fired while the unit is in the *Zero Mode*. The third is the *Armed Mode*. To get into *Armed Mode*, the arming switch must be pressed. Prior to entering *Zero Mode*, the IgnitionUnit records the setting of the ignition-channel control (on the transmitter). If the ignition control has been disturbed from this recorded setting, the IgnitionUnit will not arm. This safety makes it impossible for the rocket motor to fire when the arming switch is pressed. The *Firing Mode* is entered from the *Armed Mode* by advancing the ignition control past the firing point (approximately 75% of full travel). The IgnitionUnit will fire the rocket motor in the *Firing Mode*. The IgnitionUnit only stays in the *Firing Mode* for one second, after that it automatically enters *Sleep Mode*. The rocket motor cannot be fired in *Sleep Mode*. To rearm, the system must be reset (power cycled) and the above procedure repeated. The IG110U uses a bicolor LED to indicate the operating mode of the IgnitionUnit. The unit also has the option of performing a five-second countdown prior to ignition of the rocket motor.

Installation of the IG110U and its components is easy. The IgnitionUnit is powered from the receiver battery, but the rocket motor is started with a separate ignition battery. All IG110U options are selected with a simple dip switch.

The IG110U IgnitionUnit is designed to work with AM, FM, and PCM radio systems. The IG110U is sold with high quality wire to connect the IgnitionUnit, ignition battery, and igniter clips. **PME** recommends that rocket powered and rocket equipped models be flown only by experienced, adult pilots.

Accessories Required:

The IG110U IgnitionUnit requires one male radio connector, one or two 7.2-volt rechargeable batteries, and a pair of igniter clips. **PME** offers the optional IP111R and IP112R IgnitionPowerUnits to make ignition battery installation and wiring a snap. See the *Accessory Extras* section for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.35" x 1.25" x 0.4" (or) cm): 3.4 x 3.2 x 1; Wt: 0.5 oz (14 gm); Power Consumption: ≈ 2-30 mA

CR1210A RetractController™



The *PRECISIONMICROELECTRONICS* CR1210A RetractController is designed to operate electric landing gear retract units which work on normal and reverse-polarity power. The RetractController connects between the receiver's retract channel and the electric retract units. For example, when "down" mode is selected, power is applied to the retracts and the gear are deployed; when "up" mode is selected, the polarity of the power to the retract units is reversed and the gear move in the opposite direction. A small relay is used to control the polarity of the power to the electric

retracts. The electric retract units can be powered from either the receiver battery pack or an auxiliary battery pack.

The CR1210A RetractController is microprocessor controlled and features function reversing. The CR1210A is designed to function with electric retract units which operate on 4-12 Volt power. The RetractController can dissipate about 10 watts of power so the retract system should pull no more than 1.5 amps total. The RetractController simply plugs into the retract channel of your receiver. The retract power supply plugs into the CR1210A circuit board and the electric retract units connect to a convenient screw terminal.

The CR1210A is designed to work with popular AM, FM, and PCM radio systems. Operation can quickly be reversed simply by setting a jumper on the CR1210A circuit board.

Accessories Required:

The CR1210A RetractController will require a male radio connector. To power retract units from the receiver battery pack requires a special wiring harness, **PME** Part CR1210PC. See The Accessory Extras Section for a complete selection of accessories required by **PME** products.

Specifications:

Size (L x W x H): 1.5" x 0.9" x 0.4" or (cm): 3.8 x 2.3 x 1; Wt: 0.4 oz (11 gm); Power Consumption: ≈ 2-30 mA

SC1010U SloServo™

Do you have an application where the normal servo movement is too fast? Do you want that "scale" look when you retract your gear...slow and easy? Do your flaps deploy too fast and cause an adverse effect on your model? Perhaps you have a gas motor. Gas motors typically do not like the violent throttle movements two-stroke glow motors are used to. The **PRECISIONMICROELECTRONICS** SC1010U SloServo is a small, light weight unit which can help you. A SloServo on your throttle will give you smooth control and will tame that sensitive gas motor. A SloServo on your flaps will take out that violent action and make them more realistic and easier to use.

The SC1010U SloServo makes everything simple and easy. Just plug the SC1010U into the receiver channel and your servo into the SC1010U. Now all you have left to do is set the travel time and let the SC1010U SloServo do the rest.

The SC1010U SloServo features function reversing and sixteen different travel times (from normal to very slow). The travel time and reversing are set with simple dip switches.

The SC1010U SloServo offers a simple, quick, and easy solution for applications requiring retarded servo movement. The SC1010U is microprocessor controlled and is designed to work with AM, FM, and PCM radio systems: Airtronics, Futaba, Hitec, and JR. The servo output pins can quickly be configured for any make of servo (ATX, ATXZ, Futaba, Hitec, JR) simply by setting two jumpers.

Accessories Required:

The SloServo requires one male radio connector. See The Accessory Extras Section for a complete selection of accessories required by **PME** products.

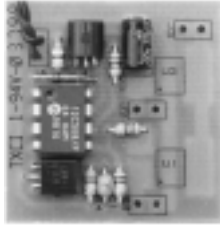
Specifications:

Size (L x W x H): 1.6" x 0.9" x 0.4" or (cm): 4 x 2.3 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 2 mA



BB1110U PowerBackup™

The **PRECISIONMICROELECTRONICS** BB1110U PowerBackup is designed to provide modelers with the peace of mind and safety that comes when your model has a spare battery pack on board. The BB1110U monitors the condition of your receiver battery and automatically switches to the backup battery pack when the primary pack begins to lose power. If for some unthinkable reason the backup pack also loses power, the BB1110U PowerBackup will switch back to the primary. You might think this would be pointless except that nicad packs tend to recover a little capacity if left to rest for a while. The



Power Backup will continue to switch between the two battery packs until it squeezes out the last milliamp of power for your radio system. Primary and secondary packs may be of different capacity, and while it is best if both battery packs are the same voltage, the BB1110U will tolerate packs of different voltage.

The BackupUnit is microprocessor controlled to provide an intelligent battery management system. The microprocessor continuously monitors the condition of your battery packs and is ready to take instant action if and when necessary. The BB1110U features an led indicator to show which battery pack is being used.

The PowerBackup is designed to work with all popular AM, FM, and PCM radio systems.

Accessories Required:

The BB1110U PowerBackup will require one male battery (radio) connector and two female battery (radio) connectors. See The Accessory Extras Section for a complete selection of accessories required by **PME** products.

Specifications:

Size (L x W x H): 1.0" x 1.1" x 0.4" or (cm): 2.5 x 2.6 x 1; Wt: 0.5 oz (14 gm); Power Consumption: ≈ 2-30 mA

ES1810U Exponential ServoDriver™



The **PRECISIONMICROELECTRONICS** ES1810U Exponential ServoDriver is designed to drive a standard proportional servo exponentially. The ES1810U causes the servo to be less sensitive to stick movements when the stick is near the center position. The more the stick is moved from center the more sensitive the servo becomes. In other words, near center stick a large stick movement produces a small servo response; near full stick a small stick movement causes a large servo response. Some manufacturers refer to this as

negative exponential while others call it positive exponential—we will refer to it as negative exponential. This type of servo response can help desensitize car and boat steering and airplane controls while allowing full range movement. The Exponential ServoDriver is designed for use with servos operated with *center-deflection* type controls (centering sticks, wheels, and knobs) not *end-to-end* controls (throttle sticks, toggle switches, or push buttons).

The ES1810U Exponential ServoDriver is microprocessor controlled. The Exponential ServoDriver can be set to operate a servo normally or at one of eight different exponential rates and can be reversed. The ES1810U makes everything simple and easy—just plug the Exponential ServoDriver into the receiver channel, and your servo into the ES1810U. The rate and reversing options are selected with a simple dip switch.

The Exponential ServoDriver is designed to work with most AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo by simply setting two jumpers.

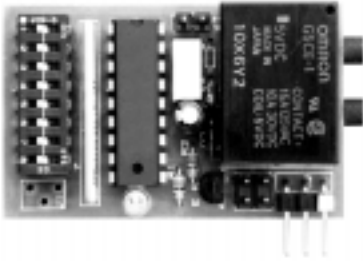
Accessories Required:

The ES1810U Exponential ServoDriver will require one male radio connector. See The Accessory Extras Section for a complete selection of accessories required by **PME** products.

Specifications:

Size (L x W x H): 1.6" x 0.9" x 0.4" or (cm): 4 x 2.3 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 5 mA

AS720U AccessorySwitch™



Sometimes you need the ability to control an accessory item in your model. That accessory could be lights, motors, or some other sort of electrical device. If you have an electrical accessory you need to control, the **PRECISIONMICROELECTRONICS** AS720U AccessorySwitch could be for you. The AccessorySwitch gives you the ability to add an on/off function to any channel without sacrificing that channel's ability to control a proportional servo. The AS720U is designed to supply your accessory with power from any source you choose with a maximum power dissipation of 300 watts.

With the AS720U AccessorySwitch, you will never have to piece together a switch-based mechanical system to control your accessory item. Mechanical systems needlessly complicate your control linkages, and some even "waste" a servo and y-harness.

The AS720U AccessorySwitch makes everything simple and easy. Just install your servo and linkage in the manner which best suits your model and let the AS720U do the rest.

Controlling the AccessorySwitch is a tiny microcomputer which has been programmed to operate an efficient relay for minimum loss and maximum versatility. The AS720U AccessorySwitch features function reversing, sixteen different on points (0%, 6%, 12%, 19%, 25%, 31%, 37%, 44%, 50%, 56%, 62%, 69%, 75%, 81%, 87%, 94%) and sixteen different off points (6%, 12%, 19%, 25%, 31%, 37%, 44%, 50%, 56%, 62%, 69%, 75%, 81%, 87%, 94%, 100%), a small LED indicator to help with setup (the LED is on when the accessory is on), and a safety feature that turns the accessory off if your transmitter is off.

The AS720U simply connects between the servo and receiver on the channel you pick to control your accessory. The AccessorySwitch is programmed to be off (i.e. no power the accessory) when receiver and transmitter are on and the channel control is below the on point. The AccessorySwitch will turn on after the channel control has been advanced past the on point but is below the off point. As the channel control is advanced more, past the off point, the AccessorySwitch will turn off. The on/off points are set with simple dip switches.

The AS720U AccessorySwitch is designed to work with AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo by simply setting two jumpers.

Accessories Required:

The AS720U AccessorySwitch requires one male radio connector, a power source for the accessory, and hookup wire. See The Accessory Extras Section for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.85" x 1.2" x 0.5" or (cm): 4.7 x 3 x 1.2; Wt: 0.75 oz (34 gm); Power Consumption: ≈ 2-30 mA

FM1910A FlapMixer™

The PRECISIONMICROELECTRONICS FlapMixer will greatly simplify installation of flaperon control systems. The FlapMixer is especially designed for flaperon systems using a toggle switch for flap control. In the past, these control schemes were implemented using a sliding tray or other complex mechanical linkage. Using the FlapMixer is very simple. Just install your aileron servos in the normal manner and let the FlapMixer do the rest. Simply reverse the servo directions and the FlapMixer can also be used to control spoilers.

The heart of the FlapMixer is a tiny microprocessor which has

been programmed to do electronically what other systems do mechanically. The FlapMixer features eight droop settings and reversing for each servo output. The different droop settings allow you to tailor how much droop your flaps have when activated. The droop amount can be set to 50%, 44%, 38%, 31%, 25%, 19%, 13% or 6%.

The FlapMixer will not overdrive your servos since the output to each servo is limited by the microprocessor to 100%—no matter what the mixing situation. All FlapMixer rates and options are set with a dip switch. The FlapMixer is designed to work with inexpensive "non-computer" AM, FM and PCM radio systems. The servo output pins can quickly be configured for any make of servo by setting two jumpers.

Accessories Required:

The FlapMixer requires two male radio connectors. See the Accessory Extras section for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.6" x 0.9" x 0.4" or (cm): 4 x 2.3 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 5 mA



SD1710X* Manual ServoDriver™

(servo not included)



The **PRECISIONMICROELECTRONICS** SD1710 Manual ServoDriver allows a modeler to control a proportional servo without the need of a transmitter or receiver. The ServoDriver has a potentiometer which is used to control the movement of the attached servo exactly like a knob-type control on a transmitter. The only difference is the SD1710 can operate the proportional servo from gear-lock to gear-lock, there is no constraint which stops the servo at 100%. Another feature of the ServoDriver is the "center seek" button. Push the small button on the SD1710 and the servo instantly moves to the center position (1520us signal). The SD1710 Manual ServoDriver is a snap to use, just hook up a servo and a receiver battery—that is all there is to it.

The SD1710 Manual ServoDriver offers a simple solution for manually controlling servos without the need of a radio system. The ServoDriver is microprocessor controlled and is designed to work with all modern servos. The SD1710 comes complete with battery input and servo output leads—for complete part number, specify radio code: **A-ATX, F-Futaba, J-JR/Hitec/ATXZ**. By using simple CrossAdapters (see the *Accessory Extras* section of this catalog), the servo output can quickly be configured for any make of servo.

Accessories Required: A receiver battery pack.

Specifications: Size (L x W x H): 3.3" x 2.2" x 2.1" or (cm): 84 x 56 x 52; Power Consumption: ≈ 5 mA + Servo

SD1720X* Manual ServoDriver™ with NiCads

A special version of the SD1710 Manual ServoDriver with a built-in 250 mA NiCad receiver pack and charging lead. Use your receiver charger to recharge the SD1720 ServoDriver *For complete part number, specify radio code: **A-ATX, F-Futaba, J-JR/Hitec/ATXZ**.

SE1310U ServoCycler™ Servo Driver

The **PRECISIONMICROELECTRONICS** SE1310U ServoCycler allows a modeler to test proportional servos by running them through a repeating series of movements designed to test the limits of a servo's mechanism and range of movement without the need of a transmitter or receiver. The ServoCycler can operate a proportional servo at one of eight user-selectable speeds and one of four selectable movement ranges. The SE1310U ServoCycler makes everything simple and easy. Simplicity really is the keyword. First, with simple dip switches, set the sweep speed and movement range to match the servo. Next, hook up a servo and a receiver battery, and off it goes—it is automatic. The SE1310U ServoCycler commands your servo through the following set of movements: (1) Center [1520us], (2) Full Minimum, (3) Sweep to Maximum, (4) Sweep to Minimum, (5) Center, (6) Oscillate from side to side in decreasing movement range seeking the center position, (7) Oscillate from side to side from the center position in increasing movement range to Max/Min. positions—repeat...as long as the power is on.

The SE1310U ServoCycler offers a simple solution for actively testing servos. The ServoCycler is microprocessor controlled and is designed to work with all modern servos. By setting jumpers, the servo output pins can quickly be configured for any make of servo.

Accessories Required:

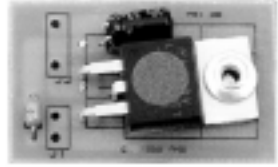
The SE1310U ServoCycler requires one female battery (radio) connector. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products. A receiver battery pack.

Specifications:

Size (L x W x H): 1.6" x 0.9" x 0.4" or (cm): 4 x 2.3 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 5 mA



PR1410U 5-Volt PowerRegulator™



It is a fact about servos that the higher the voltage the faster the response. When freshly charged, a 5-cell pack can have voltage as high as 6.5-volts. As the battery pack ages and is used, the voltage gradually drops until the pack becomes nearly fully discharged; then the voltage drops sharply. This means that your servos respond differently with a freshly charged pack versus a pack which has been used or has sat for several days. If you are a pattern or helicopter flier, your servo response is critical. You train and practice expecting the same response each and every time you fly. The **PRECISIONMICROELECTRONICS** PR1410U 5-Volt PowerRegulator is designed to provide a constant-voltage power source for models using 5-cell battery packs. The low-dropout twin IC regulators of the PR1410U supply your model with plenty of controlled power, and they will continue to regulate 5-Volts with a supply voltage as low as 5.5-Volts. This means that even as the battery pack begins to die, the PR1410U continues to function.

The PR1410U 5-Volt PowerRegulator is designed to work with all radio systems powered by 6-Volt battery packs.

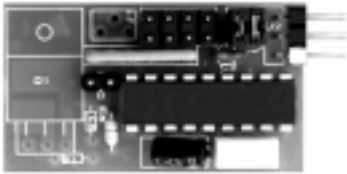
Accessories Required:

The PR1410U 5-Volt PowerRegulator will require one male battery (radio) connector and one female battery (radio) connector. See The Accessory Extras Section for a complete selection of accessories required by **PME** products.

Specifications:

Size (L x W x H): 1.2" x 0.78" x 0.4" or (cm): 3 x 2 x 1; Wt: 0.5 oz (14 gm); Power Consumption: ≈ 2-30 mA depending upon current draw; Power Source: 5.5 to 7-Volt; Regulated Voltage: 5-Volt nominal.

FS1510U Single-Channel FailSafe™



Do you have fears about what would happen if you lost radio control of your model? You can help overcome those worries by using a failsafe device. A failsafe may be used to set up the position a servo moves to in the case of radio interference or radio signal loss. This function is common on PCM radio systems and can now be added to any radio by using the **PRECISIONMICROELECTRONICS** FS1510U Single-Channel FailSafe. The Single-Channel FailSafe is ultra easy to set up—simply install the FS1510U between the receiver and servo on the desired channel.

The failsafe preset position, that is, the position the servo moves to upon loss of signal, can be selected from one of 32 different positions spread evenly along the range of servo movement. This should provide the modeler with a failsafe preset position which is just right for any situation.

At the center of the FS1510U FailSafe is a tiny microcontroller. The microcontroller has been programmed to monitor the channel it is connected to and watch for an interruption of signal. Immediately upon detection of a signal failure, the FS1510U will move the servo to the failsafe preset position. If a signal returns then the FS1510U will return control of the servo to the receiver. The failsafe preset position is set with simple jumpers.

The FS1510U Single-Channel FailSafe is designed to work with all modern AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo.

Accessories Required:

The FS1510U Single-Channel FailSafe requires one male radio connector. See the Accessory Extras section of this catalog for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.6" x 0.95" x 0.4" or (cm): 4 x 2.4 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 5 mA

SS910U ServoSwitch™



Sometimes it would be useful to be able to turn a servo on or off. For example, nose gear steering on retractable gear models—it would be helpful if you could turn off the steering servo when the gear is retracted. Perhaps your model has a dive brake which you would like to disable at high throttle settings. The **PRECISIONMICROELECTRONICS** SS910U ServoSwitch is designed to “switch”, enable or disable, a servo by keying it to another channel. When the key channel reaches one of sixteen preselected points, the SS910U will switch the desired servo. When enabled,

the switched servo responds normally to the receiver’s signals. However, when disabled, the servo is turned off and will not respond at all. Just plug the ServoSwitch into the key or controlling channel and the switched channel, and plug the switched servo into the switch.

At the center of the ServoSwitch is a microprocessor which has been programmed to monitor the controlling channel and to switch the servo at the appropriate time. The SS910U ServoSwitch features function reversing and user-selectable switch point. The switch point and reversing are set with simple dip switches. Since any channel can control the switching and any channel can be switched, you have complete freedom in controlling your accessory functions.

The SS910U ServoSwitch is designed to work with most AM, FM, and PCM radio systems. The servo outputs can quickly be configured for any make of modern servo.

Accessories Required:

The SS910U ServoSwitch requires two male radio connectors. See The Accessory Extras Section for a complete selection of accessories required by **PME** products.

Specifications:

Size (L x W x H): 1.6” x 0.9” x 0.4” or (cm): 4 x 2.3 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 5 mA

ST810U ServoTrigger™

Do you need to control an extra function in your model without using another channel or mixing option. You might like to add brakes, dive brakes, opening canopies, flaps, gear doors, or some other detail. If you have a non-proportional function you would like to key or “trigger” off another channel, automatically, the **PRECISIONMICROELECTRONICS** ST810U ServoTrigger is for you.

The ServoTrigger gives you the ability to key or trigger a non-proportional servo function off of any channel without sacrificing that channel’s ability to control its normal function. The ST810U is designed to “trigger”, and sweep the servo, when the controlling channel reaches one of sixteen preselected points. The ST810U ServoTrigger makes everything simple and easy. Just install a y-harness on your controlling channel, connect the ServoTrigger to the y-harness, plug your function servo into the ST810U and set the trigger point.

At the center of the ServoTrigger is a tiny microcomputer. The computer has been programmed to monitor the controlling channel and operate any attached servo. The ST810U ServoTrigger also features function reversing. The trigger point and reversing are set with simple jumpers. Since any channel can control one or more ServoTriggers, you have complete freedom in controlling your accessory functions.

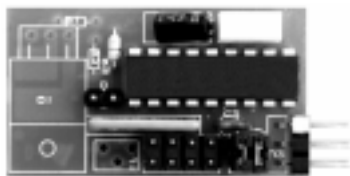
The ST810U ServoTrigger is designed to work with all modern AM, FM, and PCM radio systems. The servo output pins can quickly be configured for any make of servo.

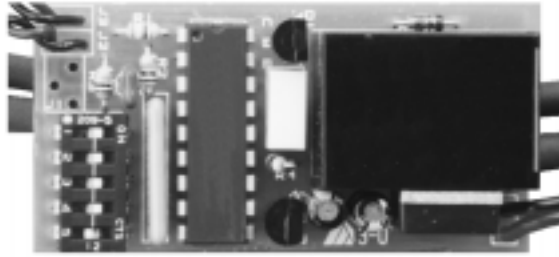
Accessories Required:

The ST810U ServoTrigger requires one male radio connector. See the Accessory Extras section of this catalog for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 1.6” x 0.95” x 0.4” or (cm): 4 x 2.4 x 1; Wt: 0.25 oz (7 gm); Power Consumption: ≈ 5 mA





ThrottleSwitch™

- ✓ Auto-cutoff
- ✓ Many safety features
- ✓ Microprocessor controlled
- ✓ Receiver battery eliminator
- ✓ Auto-timer for precise motor runs

TS610A ThrottleSwitch™ with BEC

Small electric-powered R/C gliders generally do not need a fully proportional speed control. All that is required is the ability to turn the motor on and off since the electric motor is used just to get the glider up to altitude so the pilot can hunt for thermals. Electronic On-Off motor controls do exist but they lack critical safety features. With some systems, it is possible for the motor to come on when the arming switch is pressed, creating a serious safety hazard—this is impossible with the **PRECISIONMICROELECTRONICS** TS610A ThrottleSwitch. The TS610A ThrottleSwitch is so smart that it is virtually impossible to accidentally start the electric motor. The TS610A ThrottleSwitch features a power switch, an arming switch and LED indicator, reversing, a battery eliminator, auto-cutoff on low battery, auto-timer for exact motor runs, and a safety feature that disarms the unit when the transmitter is turned off.

The TS610A ThrottleSwitch gets its smarts from a microprocessor which monitors all throttle activity and ensures safety is absolute. The ThrottleSwitch has four distinct operating modes. The first operating mode is "Standby Mode" where the ThrottleSwitch is on but not receiving a signal from the transmitter; the motor cannot be run in this mode. Next is the "Zero Mode." The unit is receiving a signal from the transmitter but is in an unarmed state. The motor cannot be turned on while the unit is in the Zero Mode. To get into "Armed Mode," the arming switch must be pressed. Prior to entering Zero Mode, the ThrottleSwitch records the setting of the throttle stick. If the throttle stick is disturbed before pressing the arming switch, the TS610A will not arm. This safety makes it impossible for the motor to turn on when the arming switch is pressed after accidentally moving the throttle stick. The "On Mode" is entered from the Armed Mode by advancing the throttle stick past the on/off-point (approximately 75% of full travel). Of course, reducing the throttle stick below the on/off-point turns the motor off. The battery eliminator will power the receiver and servos from the motor battery. This eliminates the need for a separate receiver battery—saving considerable weight. You may use the battery eliminator with confidence since the auto-cutoff feature of the ThrottleSwitch will prevent the motor battery from being completely drained.

The auto-timer feature gives you the ability to execute LMR (Limited Motor Run) climbouts without the need of a stopwatch or caller. The timer can be set for 15, 30, 60, or 90 second motor runs. To start a timed motor run simply advance the throttle stick past the on/off-point and leave it there. When time is up, the microprocessor will turn the motor off. After cut off, pull the throttle stick below the on/off-point to set the ThrottleSwitch for another timed motor run. During a timed motor run, you may turn the motor off any time by moving the throttle stick to the off-position. This is another safety feature of the TS610A ThrottleSwitch.

The ThrottleSwitch is designed to work with AM, FM, and PCM radio systems. The TS610A is designed to handle 6–7 cells (7.2–8.4 volts) and approximately 30 amps.

Accessories Required: The ThrottleSwitch requires one male radio connector, power connectors for battery pack and motor, and an optional fuse. See the *Accessory Extras* section for a complete selection of accessories for all **PME** products.

Specifications: Size (L x W x H): 2" x 1" x 0.5" or (cm): 5.1 x 2.5 x 1.2; Wt: 1.2 oz (34 gm); Power Consumption: ≈ 2–30 mA; Switching Capacity: 6 to 8.4-Volts (5 to 7 cells) at 30 Amps max.

TS609A ThrottleSwitch™ without BEC

PRECISIONMICROELECTRONICS also offers the TS609A ThrottleSwitch which is a special version of the TS610A without the power switch, BEC, and low-battery auto-cutoff features.

MM2010A

Micro-ElevonMixer™

The **PRECISIONMICROELECTRONICS** MM2010A Micro-ElevonMixer is designed to provide ultra light-weight radio control models with elevon or v-tail mixing at minimum weight. The Micro ElevonMixer is fully proportional and is available with standard or custom output rates. Micro ElevonMixer provides facilities for on-board elevon or v-tail mixing which is needed with simple or non-computer transmitters. The Micro ElevonMixer is microprocessor controlled and available with standard (100%, 75%, 50%, 40%) as well as custom output rates. The output to each servo is limited by the microprocessor to 100%—so you need not be worried about overdriving your servos. The MM2010A is designed to work with AM and FM radio systems. Good soldering skills are required to connect this unit.

Accessories Required:

The MM2010A Micro-ElevonMixer requires two servo extensions to connect to your radio receiver and servos. See the *Accessory Extras* section of this catalog for a complete selection of accessories for all **PME** products.

Specifications:

Size (L x W x H): 0.8" x 0.35" x 0.15" or 2cm x 0.9cm x 0.4cm; Wt: 0.03 oz (0.75 gm);

Power Consumption: ≈ 2 mA @ 5 Volts



FMA SERVOS

(servo price list on page 22)

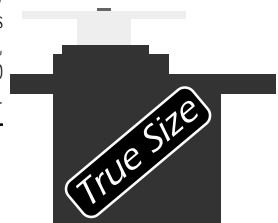


PRECISIONMICROELECTRONICS is offering customers high-quality FMA S80 Sub-Micro Ball Bearing Servos at special “while they last” prices. FMA servos are backed by a one year warranty on parts and labor. Every FMA servo is tested—servos which do not perform to specifications or are noisy or unsmooth are rejected and not sold.



Attention Glider Drivers Slope Soarers • Scale Modelers Competition Flyers • R/C Rocketry Buffs

The FMA S80 Sub-Micro **Ball-Bearing** servo is one of the smallest servos in the world. This sub-micro servo is ultra light weight and extremely fast. Weighing in at only 10 grams (0.32oz), the S80 servo has 11.1oz-in of torque with a 60° transit time of 0.11 seconds. It is perfect for gliders, slope soarers, small electric or glow models, or the newer rocket powered models and gliders. The S80 servo has many scale uses such as gear doors, access hatches, canopies, pilot animation, parachute deployment, throttle, glider tow release, and bomb release. The S80 can also be used as control servos for small models and other accessory functions.



FMA servos have splined output-shafts and come with mounting hardware and an assortment of output arms. FMA servos come with an ATX, Futaba, or JR/Hitec/ATXZ radio connector.

ACCESSORY EXTRAS

Chargelt-2™ System

Connectors and adapters for quick and easy "thru-fuselage" charging of on-board glow systems installed in airplanes.

CA210U – Chargelt-2™ BatteryCharge Connector

A charging connector which solders to your on-board glow system battery. Mates with battery side of CA230U.

CA220U – Chargelt-2™ ChargerAdapter

A simple "clip on" adapter lets you use your existing glow starter charger to charge on-board glow systems. Mates with CA210U Chargelt-2 FuselageReceptacle.

CA230U – Chargelt-2™ FuselageReceptacle

A prewired charging receptacle which mounts in the fuselage side. Mates with CA220U and CA210U.

CA240U – Chargelt-2™ Charger Connector

A charging connector which solders on your glow system battery charger. Mates with charger side of CA230U.

IgnitionPowerUnits™

Simply snap your igniter battery into place and mount with foam tape, velcro, or screws. (PowerCells not included)

IP111R – Single-Cell IgnitionPowerUnit™

A single battery IPU—perfect for Estes igniters. Wire included. Requires one CH122B PowerCell. Weight: 0.25 oz. (7 gm)

IP112R – Dual-Cell IgnitionPowerUnit™

A dual battery IPU with enough power to light even AeroTech igniters. Wire included. Requires two CH122B PowerCells. Weight: 0.5 oz. (14 gm)

AC Chargers

Makes recharging on board batteries easy. AC wall units with six foot cords, led indicators and Chargelt-2 connectors.

AC3015C – 1.5-Volt 140mA Glow Driver Charger

For glow driver systems using a single "sub-C" NiCad cell. Charges single NiCad cells at approximately 140 mA/h.

AC3015D – 1.5-Volt 400mA Glow Driver Charger

For glow driver systems using a single "D-size" NiCad cell. Charges single NiCad cells at approximately 400 mA/h.

AC3015DD – 3.0-Volt 400mA Glow Driver Charger

For glow driver systems using dual "D-size" NiCad cells. Charges two NiCad cells in series at approximately 400 mA/h.

AC3090N – 9-Volt 25mA IPU Charger

Recharges CH122B PowerCells and IgnitionPowerUnits used with on board ignition systems for rocket powered models.

NiCads

High quality 1.2-Volt rechargeable NiCad cells. Perfect for glow driver systems.

CH 122B – 7.2-Volt IPU PowerCell. Weight: 1.4 oz. (39 gm)

CN113B – 1300 mAh Sub C Cell. Weight: 1.6 oz. (45 gm)

CN122B – 2000 mAh Sub C Cell. Weight: 2.75 oz. (79 gm)

CN140B – 4000 mAh D Cell. Weight: 5.6 oz. (160 gm)

GlowClips™

Make the connection from your GlowDriver to your glow plug fast, easy, and reliable with a high-quality, locking GlowClip.

GC100U – Scale GlowClip™

With a right-angle boot on the plug end it looks like a little spark plug wire. 12-inch high quality stranded wire lead for low loss, very flexible. Pull on the wire and a spring catch in the boot grabs the end of the glow plug.

GC110U – Standard GlowClip™

A stainless steel glow-plug clip. 12-inch lead. Push down over plug and twist.

Leads, Connectors, & Adapters

High-quality, gold-plated radio connectors. Leads are heavy-duty and twisted to reduce interference.

*Specify Radio: A-ATX, F-Futaba, J-JR/Hitec/ATXZ.

SC100X* – Male Radio Connector, 6 to 8-inch leads.

SC120X* – Female Radio Connector, 6 to 8-inch leads.

SC205X* – 6-Inch Servo Extension

SC210X* – 12-Inch Servo Extension

SC220X* – 18-Inch Servo Extension

SC230X* – 24-Inch Servo Extension

SC240X* – 30-Inch Servo Extension

SC500X* – Dual-Servo "Y" Connector, 6-inch leads.

SC910X* – Male Connector Shell & Pins, unassembled.

SC920X* – Female Connector Shell & Pins, unassembled.

*For complete part number, substitute radio code from above.

SA705M*F* – 6-Inch Radio CrossAdapter™

SA710M*F* – 12-Inch Radio CrossAdapter™

*For complete part number, substitute radio codes from above. M - Male radio connector type, F - Female radio connector type.

CR1210PC – Reverse-Gender "Y" Harness, required wiring harness for CR1210A RetractController for Electric Retracts when receiver pack is also used to power electric tractors.

ACCESSORY EXTRAS

Power Connectors

Power connectors provide reliability, flexibility and convenience. High-quality, perfect for battery packs, electric motors, etc...

PC100U – PowerPole Power Connectors

Low loss, genderless “Sermos-style” connectors. Can be dovetailed together. One red and one black connector.

PC110U – Deans Ultra Plug Power Connectors

For battery packs and motors, cannot be hooked up incorrectly, gold plated. One set.

PC120U – Kyosho/Tamiya Power Connectors

Industry standard locking connector for electric-powered R/C cars and boats. Simple and economical. One set.

ST110X* – Heat Shrink Tubing

Clear tubing shrinks to less than half its original diameter. Perfect for keeping electronics and batteries from shorting against other items. Sold by the foot.

*Specify Diameter: **A**-1 1/2", **B**-2 1/2", **C**-3 1/4"

*For complete part number, substitute size code from above.

RK100U – RemoteIndicator™

A kit which allows you to mount your glow driver or accessory indicator in a visible location. Red/Green LED with 12" lead.

Wire

High-quality wire for a variety of uses. Sold by the foot.
*Specify Color: **R**-Red, **B**-Black.

WS226T – Twisted-Pair Wire

26 AWG, 19/36 strand, twisted red and black pair. Perfect for receiver packs, switches, indicators, ...

WS222T – Twisted-Pair Wire

22 AWG, 19/34 strand, twisted red and black pair. Perfect for receiver packs, switches, indicators, ...

WS118X* – Standard Hookup Wire

18 AWG, 65/36 strand, kinkless wire. Soft formulation rubber insulation for maximum flexibility. Perfect for glow plug, igniter battery, or accessory connections.

*For complete part number, substitute color code from above.

WS114X* – Heavy-Duty Hookup Wire

14 AWG, 104/36 strand, kinkless, rubber insulated wire. For electrics, battery packs, battery/motor connections.

*For complete part number, substitute color code from above.

JP121U – Option Jumpers

Extra or replacement jumpers used for setting on/off points, features or servo configurations. Used on many **PME** products. One pair.

PK600T – BEC Kit for ThrottleSwitch

A kit which allows you to add the BEC option to a TS609 ThrottleSwitch. Includes a power switch, voltage detector, voltage regulator, filter capacitor, and wire.

Service Extras

The Service Technicians at **PRECISIONMICROELECTRONICS** are happy to offer component assembly services. These services are usually free of charge provided the service is requested at the time of purchase and all components are purchased from **PME**.

Our technicians can add connectors to any of our radio control accessories, tin battery terminals and wires, and assemble components into complete¹, ready-to-install systems. All you have to do is request the service at the time of purchase.

After purchase, these same services are still available to our customers, but at our regular labor rate. Our technicians charge by the quarter-hour. Current Labor Rate: \$20.00/hr.

¹System assembly by **PME** may not be 100% complete due to installation requirements and other unknowns.

FYI – Radio Connectors

Airtronics (ATX) leads are blue or black, black, and red. Blue or outside black is signal, middle black is negative power, and red is positive power. On **PME** connectors, the signal wire is white with a black stripe.

ATXZ (blue shell) leads are blue, red and black. Blue is signal, red is positive power, and black is negative power. Since the connector shell and lead configuration is similar to JR, **PME** uses JR colored leads for ATXZ applications.

Futaba leads are white, red, and black. White is signal, red is positive power, and black is negative power. The signal wire is next to the “tab” or notch.

Hitec leads are yellow, red, and black. Yellow is signal, red is positive power, and black is negative power. Since the connector shell and lead configuration is similar to JR, **PME** uses JR colored leads for Hitec applications.

JR leads are orange, red, and brown. Orange is signal, red is positive power, and brown is negative power.

2001 CATALOG PRICE LIST

July 1, 2001

ITEM NUMBER	DESCRIPTION	Cat. Pg.	Retail Price
AS720U	AccessorySwitch™	13	\$34.95
AS710U	Low-Current AccessorySwitch™	7	\$24.95
BB1110U	PowerBackup™	12	\$36.95
CR1210A	RetractController™	11	\$29.95
EM310A	ElevonMixer™	8	\$30.95
ES1810U	Exponential ServoDriver™	12	\$28.95
FM1910A	FlapMixer™	13	\$30.95
FS1510U	Single-Channel FailSafe™	15	\$24.95
GD210A	Standard GlowDriver™ for Airplanes	6	\$34.95
GD211A	High-Current GlowDriver™ for Airplanes	6	\$40.95
GD220L	GlowDriver™ for Gas Cars	9	\$32.95
GD230M	GlowDriver™ for Gas Boats	9	\$32.95
IG110U	IgnitionUnit™ for Rocket Powered Models	10	\$39.95
MM2010A	Micro-ElevonMixer™	18	\$23.95
PR1410U	5-Volt PowerRegulator™	15	\$14.95
SC1010U	SloServo™	11	\$28.95
SD1710A/F/J	Manual ServoDriver™ * (specify ATX, Futaba, or JR•Hitec•ATXZ)	18	\$36.95
SD1720A/F/J	Manual ServoDriver™ - w/NiCad's - (specify ATX, Futaba, or JR•Hitec•ATXZ)	18	\$46.95
SE1310U	ServoCycle™ Servo Driver	18	\$24.95
SR502U	Dual-Output ServoReverser™	7	\$24.95
SS910U	ServoSwitch™	16	\$29.95
ST810U	ServoTrigger™	14	\$24.95
TS610A	ThrottleSwitch™	8	\$40.95
TS609A	ThrottleSwitch™ without BEC	8	\$36.95
AC3015C	1.5-Volt 140mA Glow Driver Charger - AC	19	\$12.95
AC3015D	1.5-Volt 400mA Glow Driver Charger - AC	19	\$12.95
AC3015DD	3.0-Volt 400mA Glow Driver Charger - AC	19	\$12.95
AC3090N	9-Volt 25mA IPU Charger - AC	19	\$12.95
CA210U	ChargeIt-2™ Battery Charge Connector	19	\$1.60
CA220U	ChargeIt-2™ ChargeAdapter™	19	\$8.95
CA230U	ChargeIt-2™ FuselageReceptacle™	19	\$4.95
CA240U	ChargeIt-2™ Charger Connector	19	\$1.60
CH122B	7.2-Volt 110 mAh NiCad PowerCell™	19	\$9.95
CN113B	1.2-Volt 1300 mAh NiCad Sub C Cell	19	\$5.50
CN122B	1.2-Volt 2000 mAh NiCad Sub C Cell	19	\$8.95
CN140B	1.2-Volt 4000 mAh NiCad D Cell	19	\$9.25
CR1210PC	Reverse-Gender "Y" Harness for CR1210A Electric RetractController	19	\$6.95
GC100U	Scale GlowClip™	19	\$6.95
GC110U	Standard GlowClip™	19	\$6.95
IP111R	Single-Cell IgnitionPowerUnit™	19	\$4.95
IP112R	Dual-Cell IgnitionPowerUnit™	19	\$8.95
JP121U	Option Jumpers — (one pair)	20	\$0.25
PC100U	PowerPole Power Connectors - (one red & one black)	20	\$1.75
PC110U	Deans Ultra Plug Power Connectors (one set)	20	\$3.25
PC120U	Kyosho/Tamiya Power Connectors (one set)	20	\$2.00
PK600T	BEC Kit for TS609A ThrottleSwitch™	20	\$5.95
RA100U	RemoteIndicator™ Kit	20	\$1.50
SA705AF	6-Inch Radio CrossAdapter™ • ATX (Male) × Futaba (Female)	19	\$4.50
SA705AJ	6-Inch Radio CrossAdapter™ • ATX (Male) × JR•Hitec•ATXZ (Female)	19	\$4.50
SA705FA	6-Inch Radio CrossAdapter™ • Futaba (Male) × ATX (Female)	19	\$4.50
SA705FJ	6-Inch Radio CrossAdapter™ • Futaba (Male) × JR•Hitec•ATXZ (Female)	19	\$4.50
SA705JA	6-Inch Radio CrossAdapter™ • JR•Hitec•ATXZ (Male) × ATX (Female)	19	\$4.50
SA705JF	6-Inch Radio CrossAdapter™ • JR•Hitec•ATXZ (Male) × Futaba (Female)	19	\$4.50

ITEM NUMBER	DESCRIPTION	Cat. Pg.	Retail Price
SA710AF	12-Inch Radio CrossAdapter™ • ATX (Male) × Futaba (Female)	19	\$5.00
SA710AJ	12-Inch Radio CrossAdapter™ • ATX (Male) × JR•Hitec•ATXZ (Female)	19	\$5.00
SA710FA	12-Inch Radio CrossAdapter™ • Futaba (Male) × ATX (Female)	19	\$5.00
SA710FJ	12-Inch Radio CrossAdapter™ • Futaba (Male) × JR•Hitec•ATXZ (Female)	19	\$5.00
SA710JA	12-Inch Radio CrossAdapter™ • JR•Hitec•ATXZ (Male) × ATX (Female)	19	\$5.00
SA710JF	12-Inch Radio CrossAdapter™ • JR•Hitec•ATXZ (Male) × Futaba (Female)	19	\$5.00
SC100A	Male Radio Connector for ATX, 6 - 8 inch	19	\$2.95
SC100F	Male Radio Connector for Futaba, 6 - 8 inch	19	\$2.95
SC100J	Male Radio Connector for JR•Hitec•ATX, 6 - 8 inch	19	\$2.95
SC120A	Female Radio Connector for ATX, 6 - 8 inch	19	\$2.95
SC120F	Female Radio Connector for Futaba, 6 - 8 inch	19	\$2.95
SC120J	Female Radio Connector for JR•Hitec•ATX, 6 - 8 inch	19	\$2.95
SC205A	6-Inch Servo Extension for ATX	19	\$4.25
SC205F	6-Inch Servo Extension for Futaba	19	\$4.25
SC205J	6-Inch Servo Extension for JR•Hitec•ATX	19	\$4.25
SC210A	12-Inch Servo Extension for ATX	19	\$4.75
SC210F	12-Inch Servo Extension for Futaba	19	\$4.75
SC210J	12-Inch Servo Extension for JR•Hitec•ATX	19	\$4.75
SC220A	18-Inch Servo Extension for ATX	19	\$5.25
SC220F	18-Inch Servo Extension for Futaba	19	\$5.25
SC220J	18-Inch Servo Extension for JR•Hitec•ATX	19	\$5.25
SC230A	24-Inch Servo Extension for ATX	19	\$5.75
SC230F	24-Inch Servo Extension for Futaba	19	\$5.75
SC230J	24-Inch Servo Extension for JR•Hitec•ATX	19	\$5.75
SC240A	30-Inch Servo Extension for ATX	19	\$6.25
SC240F	30-Inch Servo Extension for Futaba	19	\$6.25
SC240J	30-Inch Servo Extension for JR•Hitec•ATX	19	\$6.25
SC500F	Dual Servo "Y" Connector for Futaba	19	\$6.95
SC500J	Dual Servo "Y" Connector for JR•Hitec•ATX	19	\$6.95
SC910A	Male Radio Connector Shell & Pins for ATX, unassembled	19	\$1.50
SC910F	Male Radio Connector Shell & Pins for Futaba, unassembled	19	\$1.50
SC910J	Male Radio Connector Shell & Pins for JR•Hitec•ATXZ, unassembled	19	\$1.50
SC920A	Female Radio Connector Shell & Pins for ATX, unassembled	19	\$1.50
SC920F	Female Radio Connector Shell & Pins for Futaba, unassembled	19	\$1.50
SC920J	Female Radio Connector Shell & Pins for JR•Hitec•ATX unassembled	19	\$1.50
ST110A	1 1/2 Inch Heat Shrink Tubing (Clear)	20	\$1.00/ft
ST110B	2 1/2 Inch Heat Shrink Tubing (Clear)	20	\$1.25/ft
ST110C	3 1/4 Inch Heat Shrink Tubing (Clear)	20	\$1.50/ft
WS226T	26-gauge Twisted-Pair Wire (Red and Black)	20	\$0.30/ft
WS222T	22-gauge Twisted-Pair Wire (Red and Black)	20	\$0.35/ft
WS118B	18-gauge Standard Hookup Wire (Black)	20	\$0.85/ft
WS118R	18-gauge Standard Hookup Wire (Red)	20	\$0.85/ft
WS114B	14-gauge Heavy-Duty Hookup Wire (Black)	20	\$0.95/ft
WS114R	14-gauge Heavy-Duty Hookup Wire (Red)	20	\$0.95/ft

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FMA Servo Price List

(only while supplies last)

ITEM NUMBER	DESCRIPTION	DIMENSIONS L x W x H (in)	TORQUE (oz/in)	SPEED (sec/60°)	WEIGHT (oz)	PRICE
S80	Sub-Micro BB	0.85 x 0.43 x 0.78	11.1	0.11	0.32	\$15.00
S300	Standard Precision	1.60 x 0.80 x 1.50	41.7	0.14	1.55	\$9.00
S301	Standard 2BB	1.60 x 0.80 x 1.50	41.7	0.14	1.55	Sold Out
S355	Metal-Gear Hi-Torque 2BB	1.60 x 0.80 x 1.70	114.0	0.31	2.01	Sold Out
S700	Low Profile BB Hi-Speed	1.76 x 1.13 x 0.97	30.5	0.09	1.20	\$15.00

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ORDERING INFORMATION

ORDERS BY MAIL. Please use our convenient order form. Fill in your name and shipping address exactly as you want it to appear on the shipping label. If you are shipping to a business, include the name of the business as well as your name. Please give us a telephone number where you can easily be reached in case we have questions regarding your order. Some products are available in a choice of colors, sizes, or with different radio connectors. These products have item numbers which you must complete by substituting the appropriate color code, size code or radio code. Please order these products with care so you get exactly what you want.

ORDERS BY PHONE. Simply call our order line at 1-361-814-6843 and a friendly, knowledgeable Sales Representative will serve you. You may want to fill out an order form or write down your order in advance so that you will be ready with all the required information.

PAYMENT. *PRECISIONMICROELECTRONICS* accepts *MasterCard*, *VISA*, *Discover*, *American Express*, and *NOVUS Cards* with no surcharge. We also accept *checks*, *certified checks* and *money orders*. All checks are subject to bank clearance; this may delay your order up to 10 business days. The maximum fee allowed by law and all collection costs will be charged on all returned checks. We are sorry, but due to changes in carrier policy, **C.O.D. orders cannot be accepted**. International orders must be *prepaid by credit card* in U.S. funds. We are unable to accept checks or money orders drawn on foreign banks or institutions. All Texas residents must add 8.125% sales tax.

SHIPPING. Every effort is made to ship orders as quickly as possible. We maintain a large inventory of products and are able to ship many orders the next working day. Out of stock merchandise may require several weeks for shipment. All orders are charged a standard \$5.00 shipping and handling fee. This fee covers regular shipping and handling by USPS First Class in the United States and to Canada and Mexico. Other methods of shipment are available at additional cost; please call or see order form for methods and surcharges. Surcharges for international orders are based upon weight and destination—please call or write for rates. We charge our standard shipping and handling fee only once per order. Customers are not charged for shipping and handling of backorders unless special shipping methods have been requested or backorders are being shipped to international addresses.

RETURNS. All product returns must be made within 30 days from the date of invoice at the customer's expense. Please call Customer Service at 1-361-814-6843 to receive instructions prior to returning any merchandise. **Defective** products will be accepted for refund as long as they are in new and unused condition. Used products will be repaired or replaced according to our warranty policy. **Non-defective** merchandise must be returned 100% complete, in resalable condition, including original packaging, manuals, blank registration cards, and all supplied parts. Any non-defective product returned without these materials will be subject to a 20% restocking fee. All non-defective returns are subject to shipping and handling fees.

Buy with Confidence from ***PRECISIONMICROELECTRONICS!***

- 30-Day Money-Back Guarantee •
- 1-Year Limited Warranty •
- Made in the U.S.A. •
- Service and Accessory Extras •
- Every Unit Fully Assembled and Tested •
- Run by Modelers Who Understand Your R/C Problems •



CUSTOMER ORDER FORM



PLEASE PRINT OR TYPE

Name _____
 Address _____
 City _____
 State _____ Zip Code _____ Phone () _____

Help us get things right! Please indicate type of radio control system you will be using with the products ordered below:

ATX Futaba RCD/Hitec AM/FM
 ATXZ JR _____ PCM

PME ITEM NUMBER	QTY	DESCRIPTION	UNIT PRICE	TOTAL

METHOD OF PAYMENT <input type="checkbox"/> Money Order <input type="checkbox"/> VISA <input type="checkbox"/> American Express <input type="checkbox"/> Check <input type="checkbox"/> MasterCard <input type="checkbox"/> Discover/NOVUS Card No. _____ Card Expiration Date _____ _____ Authorized Signature	MERCHANDISE TOTAL	
	SHIPPING AND HANDLING	\$5.00
	SHIPPING SURCHARGES:	
	SUBTOTAL	
	8.125% SALES TAX (TX Residents Only)	
	ORDER TOTAL	

TERMS: Net U.S. Funds — Charge Card, Bank Check, or Money Order. Checks and money orders are subject to bank clearance.

PME normally ships all packages 14ozs and under via USPS First Class; over 14ozs are shipped USPS Priority without surcharge.

SHIPPING SURCHARGES:
 Priority Mail (under 14ozs) \$ 1.50
 Express Mail \$16.75[‡]
 FedEx 2nd Day \$ 9.25[‡]
 Other methods *call for rates*
[‡]amount for 2 pound order (typical), actual amount based upon weight and destination.

PRECISION MICRO ELECTRONICS

P. O. Box 3129 • CORPUS CHRISTI, TX 78463-3129

ORDERS, INFORMATION, CUSTOMER SERVICE: 361-814-6843 • M - F, 11AM - 6PM (CENTRAL TIME)
 FAX: 361-814-5843 • WEB SITE: pme-rc.com • E-MAIL: pmetek@swbell.net

INFORMATION & POLICY

Guarantee. All **PRECISIONMICROELECTRONICS** products are *fully guaranteed* to your satisfaction. If, for any reason, you are not pleased with one of our products, return it within 30 days for refund of the purchase price. Damaged, modified or used merchandise cannot be accepted for refund.

Limit of Responsibility. **PRECISIONMICROELECTRONICS** accepts no responsibility for crash damage and/or loss of kits, engines, servos, receivers, etc... incurred during the operation of a radio-controlled model. We cannot be held responsible for components incorporated into radio systems containing **PME** products, or problems caused by incompatibility between components in radio systems containing **PME** products. Also, we have no responsibility for repairs not completed by our service center.

Customer Privacy. We do not sell, rent or give our customer information to anyone. Our customers will *never* receive unwanted mailings from other companies because somebody misused our mailing list. **PRECISIONMICROELECTRONICS** guarantees customer privacy as well as satisfaction.

Other Stuff. All prices and product specifications are subject to change without notice. **PRECISIONMICROELECTRONICS** is not responsible for any typographical or printing errors in this catalog. All trademarks in this catalog are the sole property of their respective owners.

LIMITED WARRANTY

Your **PRECISIONMICROELECTRONICS** product is warranted against defects in materials or workmanship for a period of one (1) year from the date of original consumer purchase. If a **PME** product becomes defective during this warranty period, return the product, with proof of purchase, and **PME** will repair it, or replace it at our option, without charge for parts or labor. Purchaser shall bear all shipping costs to the PME Service Center. **PME** pays the cost of returning products serviced under this Limited Warranty. This Limited Warranty extends only to the original consumer buyer and is not assignable or transferrable to any other person.

This Limited Warranty does not cover damage caused by accidents, alterations, tampering, unprotected installation, unauthorized repair, misuse, failure to follow instructions, heat, moisture, fire, flood, or acts of God. This Limited Warranty does not cover batteries or other accessories or products not manufactured by **PRECISIONMICROELECTRONICS**. **PME** does not warrant compatibility with other equipment. This Limited Warranty also does not cover any **PME** products purchased or used outside the United States and Canada or in any of its territorial possessions.

Acceptance and use of any **PME** product constitutes Purchaser's agreement that repair or replacement, or refund of the original purchase price will be the **SOLE AND EXCLUSIVE REMEDY** for any claim by Purchaser against **PME**. Under no circumstances whatsoever will more than the full original purchase price of the **PME** product be payable. THIS WARRANTY AND REMEDIES SET FORTH ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, ORAL OR WRITTEN, EXPRESS OR IMPLIED. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

PME SHALL NOT BE LIABLE UNDER THIS LIMITED WARRANTY FOR ANY INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES, INCLUDING BUT NOT LIMITED TO, LOSS OF TIME, LOSS OF PROFITS, LOSS OF USE, PROPERTY OR ECONOMIC DAMAGES due to a defect in a **PME** product or its failure to function. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.

Send all warranty returns with proof of purchase to:

PME SERVICE CENTER • P.O. Box 3129-SC • CORPUS CHRISTI, TX 78463-3129

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P. O. Box 3129 • CORPUS CHRISTI, TX 78463-3129

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FAX: 361-814-5843 • WEB SITE: pme-rc.com • E-MAIL: pmetek@swbell.net

***PRECISION*MICROELECTRONICS**

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