

**REMTRON**  
WIRELESS CONTROL SYSTEMS



# *Wireless Controls for Cranes and Industrial Applications*



**Command Pro**

**REMTRON** 21T18-149

Patent #5,508,479



"Despite being crushed by a forklift, our transmitter kept right on working!"

**TESTIMONIALS**

"...to our disbelief the box kept on working. We appreciate the quality of your products.."

**Steven Teipel**  
 Manager of Plant Operations, Earle M. Jorgensen Company

"You have succeeded in providing us with the best possible answer to our problem."

**Tony Blaszak**  
 Boeing, Portland Plant

**The Best Value Backed by the Best Warranty!**

Our **customers** rely on our equipment to be simple to use, easy to maintain and **trouble free** for many years. After all, if our equipment fails, your production stops. When that happens you lose revenue that can easily exceed many times the amount of your wireless control investment. So we **designed** our equipment to be **durable**, reliable and easy to maintain and we back it up with best support in the industry.

- **UNCONDITIONAL WARRANTY**
- "Gorilla Tough" Durability
- 24 Hours/7 Days a Week Technical Support

**Reliable and Safe**

Best Value means **reliable** and **safe** service. Remtron equipment is specifically designed to handle critical industrial and construction tasks.

- 900 MHz Reliability
- Advanced Packet Data Coding for Reliable Communications
- Cyclic Redundancy Code (CRC) for Positive Command Verification
- Control Time Outs to protect against inadvertent commands
- Programmed Fail-Safe Monitors protect against failures of transmission or equipment.

**Low Maintenance and Long Life**

Best Value also means **low cost** of ownership and long life. Remtron equipment is designed to reduce maintenance and lower service cost.

- Industry's longest battery life  
 - Over 135 hours of continuous operation
- Standard or rechargeable AA batteries
- 1-2 day service turn around
- Lowest service cost in the industry
- 1,000,000-cycle rocker and rugged case durability
- 15 Year product life support



**CRANE CONTROLS**

**Standard Crane & Hoist Systems**



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# Crane Control Systems

## PATRIOT

Remtron presents the Patriot®

The most affordable, **high quality** wireless crane **controls** available. 100% American made and supported, the Patriot® is offered in two models, both of which use Remtron's proven Command Pro® technology. Both systems are shipped ready to install with a six foot long wiring harness and include our exclusive extruded aluminum receiver enclosure. Best of all, the Patriot series transmitters come with a **One Year Unconditional Warranty!**

- UNCONDITIONAL WARRANTY
- LOW COST OF OWNERSHIP
- SUPERIOR FACTORY SUPPORT
- BUILT-IN 6 FT. WIRE HARNESS
- 100% MADE & SUPPORTED IN THE USA



### MODEL 25S11 DESIGNED FOR 3 MOTION/2 SPEED



### MODEL 25S15 DESIGNED FOR 5 MOTION/2 SPEED



## APPLICATION SYSTEMS

• Quality You Can Rely On.

• Unconditional 2 Year Warranty



### MODEL 1008

VERSATILE AND ECONOMICAL CONTROL SOLUTION FOR:

- 3-MOTION/1-SPEED CRANES
- 2-SPEED MONORAILS
- HOISTS



### MODEL 1814

DESIGNED FOR 3-MOTION/  
2-SPEED CRANES

- SUPPORTS VFD, PLC CONTACTOR-BASED CONTROLS
- 2-STEP PUSH BUTTONS
- A/B/BOTH PUSH BUTTON FOR TROLLEY/HOIST SELECTIONS



### MODEL 2014

LARGER TRANSMITTER FOR  
3-MOTION/2-SPEED CRANES

- OPTIMAL FOR USE WITH HEAVY GLOVES
- SUPPORTS VFD, PLC AND CONTACTOR-BASED CONTROLS
- 2-STEP PUSH BUTTONS
- A/B/BOTH PUSH BUTTON FOR TROLLEY/HOIST SELECTIONS



### MODEL 2322

POWERFUL CRANE CONTROL SYSTEM:

- UP TO 3-MOTION/5-SPEED CONTROLS
- 3-MOTION/3-SPEED STEPPED CONTROLS
- ALLOWS DIRECT SELECTION OF SPEEDS FOR ACCURATE CONTROL
- A/B/BOTH PUSH BUTTON FOR TROLLEY/HOIST SELECTIONS

# Crane Control Transmitters

• Customizable to Any Application

• 2 Year Unconditional Warranty



MODEL 21T34



MODEL 21T44

## BELLYBOX STYLE TRANSMITTER FEATURES

- LOW POWER CONSUMPTION FOR LONG BATTERY LIFE – UP TO THREE MONTHS ON AA BATTERIES
- RUGGED CASES HOLD UP TO INDUSTRIAL DEMANDS
- EASY-TO-USE “PUSH-TO-OPERATE” (PTO) BAR
- SELF-TEST LED PROVIDES TRANSMITTER AND BATTERY STATUS
- EMBEDDED ANTENNA PREVENTS BREAKAGE
- OPTIONAL UL 913 RATING FOR CLASSIFIED ENVIRONMENTS.



MODEL 21T46



MODEL 21T54



MODEL 21T18

## TWO-STEP MODELS

## HANDHELD STYLE TRANSMITTER FEATURES

- LOW POWER CONSUMPTION FOR LONG BATTERY LIFE – TYPICALLY ONE TO TWO MONTHS ON AA BATTERIES
- INTERNAL ANTENNA PREVENTS BREAKAGE
- SELF-TEST LED PROVIDES TRANSMITTER AND BATTERY STATUS
- RUGGED CASE, MADE FROM ADVANCED COMPOSITES, HOLDS UP UNDER TOUGH INDUSTRIAL DEMANDS
- INCLUDES LEATHER HOLSTER FOR ADDED PROTECTION
- LONG-LIFE SWITCHES WITH TACTILE-FEEDBACK
- OPTIONAL UL 913 RATING FOR CLASSIFIED ENVIRONMENTS.



MODEL 21T20



MODEL 21T23

## SINGLE-STEP MODELS



MODEL 21T10



MODEL 21T14

# Control Receivers

Customizable to Any Application



MODEL 22R08ES

MODEL 21R14

MODEL 21R22

## RECEIVER FEATURES

- NEMA 4 PACKAGE, EASY TO INSTALL
- COMPATIBLE WITH CONTACTOR OR VFD SYSTEMS
- REDUNDANT SAFETY CIRCUITS PREVENT FALSE MOVEMENTS
- EASY "SCREWDRIVER" MAINTENANCE, NO EXTRA TEST EQUIPMENT NEEDED
- TRANSFER SWITCH (EXCLUDES R08)
- UL 508 APPROVED

## RECEIVER OPTIONS

- FIRST COME-FIRST SERVE (FCFS) AND PITCH & CATCH ALLOW ONE OR MORE RECEIVERS TO BE CONTROLLED BY UP TO SIX TRANSMITTERS (AVAILABLE ON R22 AND UP)
- RECEIVER REMOTE ANTENNA KIT
- OPTIONAL NEMA 7/8 ENCLOSURE FOR USE IN CLASSIFIED ENVIRONMENTS.

# General Purpose Controls

Great for Conveyors, Pumps, Gates, Doors, Lights, Emergency Stops



22T04P

22T04

22T08

22T08ES

22T09

22R04/22R08

The General Purpose Command Pro product line is suited for rugged, **industrial** applications where a few functions are needed in a **heavy duty radio**. This product series is microprocessor-based and can be programmed to **perform** a multitude of tasks involving logic, momentary and latched relay functions.

The Remtron **Safety Stop** Control System is designed to provide the means for an operator to **remotely** stop electrical equipment in times of Emergency. These Systems are designed for control of industrial machinery and are **built** to survive the wear and tear of life in factories, mills and foundries. A supplement to the hard wired E-stop on equipment, the **Safety Stop** Control System is added safety in your workplace.

## TRANSMITTER FEATURES

- INTERNAL ANTENNA PREVENTS BREAKAGE.
- LEATHER HOLSTER FOR ADDED PROTECTION.
- TEST LED PROVIDES TRANSMITTER AND BATTERY STATUS.
- LOW POWER CONSUMPTION FOR LONG BATTERY LIFE.
- RUGGED CASE MADE FROM ADVANCED COMPOSITES HOLDS UP TO INDUSTRIAL AND COMMERCIAL DEMANDS.

## RECEIVER FEATURES

- NEMA 4 PACKAGE.
- EASY "SCREWDRIVER MAINTENANCE", NO EXTRA TEST EQUIPMENT.
- TWO-PIECE TERMINAL STRIP SIMPLIFIES INSTALLATION AND SERVICE.
- STATUS LED INDICATORS PROVIDE EASY IN-FIELD FAULT ISOLATION AND DIAGNOSTICS.
- CHOICE OF 12 VDC, 24 VDC, 120 VAC OR 240 VAC POWER SUPPLIES.
- UL 913 RATING FOR CLASSIFIED ENVIRONMENTS.
- WATERPROOF RECEIVER ENCLOSURE

# Accessories

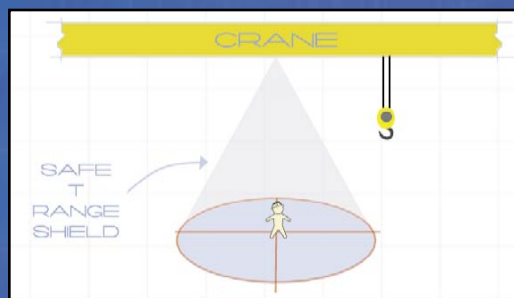


## RBK1A BRAKE KIT

The RBK1A air-over-hydraulic brake kit converts any manually operated cab-type foot brake for overhead bridge cranes to pendant or remote control operation. Designed for years of trouble-free operation, this kit parallels a foot actuated hydraulic brake. Available for all types of cranes, the three-step RBK1A is backed by Remtron's experience and reliable customer support. Stepless brake kits are also available.



Safe-T-Range keeps the **operator** within a pre-determined distance from the crane, thus increasing **safety** in the work place. Using an advanced spot antenna design along with **programmable** logic, a Safe-T-Range equipped receiver draws an electronic boundary around the crane. The system then safely stops and inhibits selected functions when the operator steps outside the **boundary**. We do all this without shutting down the main line.



- Electronic boundary range adjustable from 30' to 200'.
- Works with any 21 series transmitter and available on R22-based receivers.

RAC17



RAC16A

## WIRELESS CONTROL SYSTEMS PROGRAMMER

All Remtron **systems** can be easily **programmed** in the field **without** the necessity of hard-to-use dip **switches**. Both the operating frequency and the unit address are contained in a simple 6-character ID code.

### RAC16A Handheld Programmer

Completely **portable** and small enough to fit in your tool pouch. The RAC16A quickly changes ID codes and some **simple** set-up parameters. It also transfers complete set-up information from a fixed computer site to a receiver. For most applications this is the only **programmer** needed.

### RAC17 PC-based Programmer

Operating under the Windows® environment, the RAC17 provides large facilities a convenient method to **maintain** set-up information on systems under their **control**. Each file contains the equipment type, ID code and set-up parameters. If a spare transmitter or receiver is needed, the file for that particular equipment can be opened and the information simply **downloaded** into a spare unit.

- Reconfigure Command Pro radio remote control systems in minutes.
- Change ID codes and set-up configurations right in the field.
- Portable and PC-based programmers available.

## LEATHER HOLSTER



Rugged leather holsters and straps are included as **standard** equipment with all Remtron 21 and 22 Series handheld transmitters. The holsters make it **convenient** to operate the transmitter while on your belt. Shoulder straps are included as standard equipment with all Remtron 21 Series level style transmitters.

# Specifications

Systems	Patriot		Application Systems				General Purpose	
	25S11	25S15	1008	1814	2014	2322	0404	0808
Applications	Economy		Full Feature					
	3-Motion 2-Speed Cranes	5-Motion 2-Speed Cranes	3-Motion 1-Speed Cranes/ 2-Speed Monorails	5-Motion 2-Speed Cranes	5-Motion 2-Speed Cranes	3-Motion 5-Speed & 3-Speed Cranes	General Industrial Use 4-Function	General Industrial Use 8-Function
Features	Maintained Link	Yes	Yes	Yes	Yes	Yes	Yes	
	Transmitter Warranty	1 Year Uncondtl	1 Year Uncondtl	2 Year Uncondtl	2 Year Uncondtl	2 Year Uncondtl	2 Year Uncondtl	2 Year Uncondtl
	Receiver Enclosure							
	Type	Remtron Aluminum	Remtron Aluminum	Standard Steel	Standard Steel	Standard Steel	Standard Steel	Standard Steel
	Environment	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4
	Connection	6" Wiring Harness	6" Wiring Harness	Terminal Strip	Terminal Strip	Terminal Strip	Terminal Strip	Terminal Strip
Transfer Switch A/B/Both Switch/Relays		Yes		Yes	Yes	Yes		
Transmitter	21T18	21T18	21T10	21T18	21T20	21T23	22T04	22T08
Receiver	25R11	25R15	21R10	21R14	21R14	21R22	22R04	22R08

## Systems:

- 902-928 MHZ, 81 FREQ. (FCC LICENSE-FREE OPERATION)
- 300 FT. RANGE
- 60 MILLISECONDS RESPONSE TIME
- -20° TO 160°F OPERATING TEMP.
- SELF TEST LED INDICATORS
- NEMA 7 & 8 ENCLOSURES AVAILABLE



Transmitters	T04P	T04	T08	T08ES	T09	T10	T14	T18	T20	T23	T34-3	T34-6	T44-3	T44-4	T46-5	T46-6	T54
Type	Handheld	Handheld	Handheld	Handheld	Handheld	Handheld	Handheld	Handheld	Handheld	Handheld	Box	Box	Box	Box	Box	Box	Box
Controls (Maximum Capacity)																	
Functions	4	4	8	8	9	8	12	18	20	22	40	40	40	40	60	60	40
Discrete Rockers		2	4	4	3	4	6			9							
2-Step Rockers								3	3								
Push Buttons	4			2	2	2	2	6	8	5							
Multiplex Selector									1	1	1	1	1	1	1	1	1
Key Switch										1	1	1	1	1	1	1	1
Bi-Directional Levers											4	6	3	4	5	6	4
Joy Sticks													3	3	5	5	4
Toggle Switches																	
ESTOP Button				1	1	1	1	1	1	1	6	8	8	8	10	10	24
ESTOP Mushroom Button					1		1				1	1	1	1	1	1	1
Maintained Link				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Continuous Battery Op Hours	130	130	130	130	130	130	130	130	200	200	350	350	350	350	350	350	350
Dimensions, Inches	6x3x1	6x3x1	6x3x1	6x3x1	8x3x1	6x3x1	8x3x1	8x3x1	12x4x1	12x4x1	5x9x6	5x9x6	5x10x7	5x10x7	5x13x7	5x13x7	5x10x8
Weight, lbs	0.75	0.75	0.75	0.75	0.75	0.50	0.75	0.75	1.25	1.25	4.5	4.5	4.0	4.0	4.0	4.0	4.0
Options																	
Push-to-Operate Bar											X	X	X	X	X	X	X
Fixed Mount	X	X	X	X	X	X	X	X									
On/Off Guard Ring				X	X	X	X	X	X	X							
Custom Labeling/Programming	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Receivers	22R04	22R08	21R10	21R14	25R11	25R15	21R22	21R30	21R44
Controls									
Discretes	4	8	10	14	11	15	22	30	44
Proportional							8	8	8
Interface									
Type	10 Amp Relays	10 Amp Relays	10 Amp Relays	10 Amp Relays	10 Amp Relays	10 Amp Relays	Analog and 10 Amp Relays	Analog and 10 Amp Relays	Analog and 10 Amp Relays
Connection	Terminal Strip	Terminal Strip	Terminal Strip	Terminal Strip	6' Wiring Harness	6' Wiring Harness	Terminal Strip	Terminal Strip	Terminal Strip
Maintained Link			Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enclosure	Standard	Standard	Standard	Standard	Remtron Compact	Remtron Compact	Standard	Standard	Standard
Dimensions, inches	8x6x4	8x6x4	10x8x4	12x10x5	10x5x2.5	10x5x2.5	14x12x6	14x12x8(min)	20x30(min)
Options									
First-Come/First Serve			X	X			X	X	X
Pitch/Catch							X	X	X
Fiberglass Enclosure	X	X	X	X			X	X	X
Stainless Steel Enclosure	X	X	X	X			X	X	X
NEMA 7/8 Exnlosure	X	X	X	X			X	X	X
Transfer Switch			X	X			X	X	X
Safe-T-Range							X	X	X

## Receivers:

- 120/240 VAC
- 12/24 VDC OPTIONAL POWER (EXCEPT PATRIOT)
- TUNED ELEMENT ANTENNA WITH TNC CONNECTOR.



***At Remtron, "Gorilla Tough" is not just our slogan, it's our promise!***

## **Background**

Remtron was established in 1984 to provide rugged radio controls for the material handling and commercial industries. Our rugged technology is based on merging of our founder's experience in the design of highly reliable aerospace wireless control systems with research done by Motorola. Remtron acquired Motorola's design criteria for the safe and reliable wireless control of heavy industrial equipment.

## **Facility**

Engineering, production, customer service and sales are integrated under one roof at our 25,000 square ft. facility in Escondido, CA. Virtually all manufacturing is performed in-house, allowing tight controls on quality and workmanship. Remtron is able to combine standard product production with production of custom or engineered systems to meet our individual customer's needs. Remtron has delivered over 25,000 wireless control systems to customers around the world.

## **Service**

Our record of repeat customers is the best testimony to our dedication to customer support. Remtron provides continuing support to over 3,000 companies in hundreds of applications throughout many industries. Our support includes a 24/7 technical support line, turnaround repair time of 1-2 days and refurbishment at the lowest rates in the industry. Remtron continues to provide parts and repair services to the equipment we produced 15 years ago. This shows our long-term commitment to our customers and their needs.



**GORILLA TOUGH!**



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