ELFATEK®
• E L E K T R O N İ K •

Radio Remote Control Systems

ELFA
ŞİRKETLERİ
www.elfasirketleri.com

ELFATEK
• ELEKTRONIK •
www.elfatek.com.tr

OUR BRANDS

ELFATEK
• ELEKTRONIK •
www.elfatek.com.tr

Crane Remote Control Systems,
Siren Lights and
Overload Systems

ELFATEK
ELFASOFT
friction

SIREX
www.sirex.com.tr
ANKEBOT
www.ankebot.com

ELFAMAK
• MAKİNE TEKNOLOJİLERİ •
www.elfamak.com.tr

CNC Routers and CNC Milling
Production

ELFAMAK   TORRO
VENOM   ALTOR

ELFA KALIP
www.elfakalip.com

Plastic Injection
Mould Production

Drawer System,
Rotating Drawer System
and Drawer Cabinet

KAPEL
www.kapelplastik.com

elfa EXPORT
www.elfaexport.com

Import and Export Services

elfa EXPORT

About Us

In 2006, Elfatek Electronik co-founders carried their 15 years industrial electronics know-how expertise to develop the first 80 channels and 250 hours battery life radio remote crane control system in Turkey.

Elfatek not only produces electronic software of its remote control sytems but also all electronic, and mechanical parts are manufacturing on its own for 15 years.

Driven by a team of highly motivated and talented engineers, the company has technologically grown with activities in various industrial fields. Today Elfatek has become a leading designer and manufacturer of industrial radio controls used in crane sector in Turkey.

Elfatek manufactures all electronic and mechanical parts to the need of customers with the highest quality and supports.

Our mission

¨Developing research and development based industrial products with high added value for increasing competitive power of our country.¨

Our vision

¨Developing industrial products at international level and becoming a leader firm in research and development filed.¨

ELFATEK®   IMAGINE, DESIGN, MANUFACTURE.

DESIGN

It is designed ergonomically, for ease of use.

REMOVABLE BATTERY

Thanks to its special design it can be removed easily.

Works with 6 AA battery

I-CHIP

Easily transfer channel and ID data to spare transmitter or receiver thanks to I-chip technology.

START BUTTON

Start button also can be used as a horn button

*Start/ horn is same button on Joystick Remote Control.

SELECTOR SWITCH

$\begin{pmatrix} 0\text{-}1 \\ 1\text{-}0\text{-}2 \end{pmatrix}$ Selected Switch

ANALOG POT

0-10 V Analog pot

ROTARY SWITCH

1/2/1+2 Rotary switch
(Permanent or Momentary)

ROTARY SWITCH

1/2/1+2 Rotary switch
(Permanent or Momentary)

ROTARY SWITCH

From 1 to 12 rotary permanent switch

ANKA SERIES JOYSTICK REMOTE CONTROL

Anka series jostick remote control systems have been specially designed for ease of use by Elfatek Electronic. Crash-Proof equipment has been used in order to enhance the crashworthiness of outer body in case of external impacts.

AREAS OF USAGE JOYSTICK REMOTE CONROL

* Overhead travelling Cranes
* Tower Cranes

* Mobile Cranes and Lifts
* Chain hoist systems

*Tow Trucks Cranes
*Sectional Door

* Hydrolic equipments
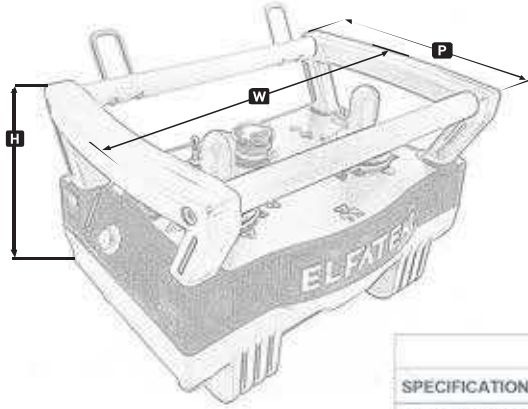* Special Machine Applications

ABOUT JOYSTICK REMOTE CONTROL

- ANKA SERIES JOYSTICK Remote Control Systems are designed to control industrial equipments. (lifts, overhead cranes, tower cranes etc.)

- Receiver and transmitter communicate constantly. If there is no operation within 5 minutes (can chance 15, 30, 45 min) ,100 meters communication distance is exceeded or battery is unexpectedly removed from joystick transmitter passes emergency stop mode.

- In all series of joysticks have low battery signal and frequency transmission signal.

- I- Chip removable frequency chip involves ID data channel and code informations of remote control which has been programmed distinctively for every different model. In case of any malfunction, I-Chip can be transferred to any Anka series spare josytick transmitter or receiver and there will be no work loss.

- By using selector switches (0-1), (1-0-2), and (Aux) button output different configurations can be made and joystick can be upgraded as multiple control systems.

- Safety and precision with ANKA series Joystick Remote Control Systems at the highest level.

- ANKA series Joystick Remote Control Systems are designed to provide economical solutions to the user.

- Battery using limit is 700 hours for constant using for JD type joystick.

STANDARD SET

- 1 Receiver Unit
- 1,5 Meter Cable
- 1 Joystick Transmitter
- 1 Strap
- 6 (AA) Alkaline Batteries
- 2 battery boxes
- 4 Receiver Monunting Screws
- 2 Pieces Spare Glass Fuse (6A)
- User manual,Certificate of Warranty, Wiring Diagram, CE Certificate
- External antenna 5 dBi (Optional)

Design patent belongs to
ELFATEK

DIMENSIONS OF THE RECEIVER

MODEL	H [HEIGHT]	W [WIDTH]	D [DEPTH]
MEDIUM RECEIVER	246 mm	130 mm	61 mm
LARGE RECEIVER	275 mm	145 mm	66 mm

Dimensions of the Transmitter

MODEL	H [Height]	W [Width]	P [Depth]
ANKA SERIES	164 mm	247 mm	170 mm

TRANSMITTER UNIT

SPECIFICATIONS	JD Model	JM Model
OPERATING FREQUENCY	2.4 GHz	868 Mhz
NUMBER OF CHANNEL	80	8
OPERATING DISTANCE	= 100 m	= 100 m
RF SYSTEM POWER	10 mW ERP [internal antenna]	10 mW ERP [internal antenna]
DATA ENCRYPTION CODE	16 Bit	32 Bit
DELAY OF THE TRANSMITTER	= 1 s	= 1 s
RESPONSE TIME	< 25 ms	< 40 ms
RT FOR EMERGENCY	< 25 ms	< 40 ms
OPERATING – STORAGE TEMPERATURE RANGE	-40 °C - +85 °C	-40 °C - +85 °C
ENCLOSURE PROTECTION RATING	IP 65	IP 65
BODY STRUCTURE	POLYAMID	POLYAMID
SUPPLY VOLTAGE	3 VDC	4.5 VDC
JOYSTICK DIAMETER	SINGLE AXIS – DOUBLE AXIS	SINGLE AXIS
ACCELERATION SELECTABLE KEY	-	4 LEVEL
CURRENT REQUIREMENT	10 mA	80 mA
BATTERY	6xAA ALKALI BATTERY	6xAA ALKALI BATTERY
CONTINIOUS OPERATING TIME	≥ 700 hour	≥ 40 hour
OPERATING TIME AFTER LOW BATTERY WARNING	5 dk [DURACELL BATTERY]	-
TRANSMITTER UNIT WEIGHT	=1800 GR - 2100 GR DEPANDS ON THE MODEL	=1800 GR - 2100 GR DEPANDS ON THE MODEL

RECEIVER UNIT

SPECIFICATIONS	JD Model	JM Model
OPERATING FREQUENCY	2.4 GHz	868 Mhz
CHANNEL NUMBERS	80	8
OPERATING DISTANCE	=100 m	=100 m
DATA ENCRYPTION CODE	16 Bit	32 Bit
DELAY OF THE RECEIVER	= 1 s	= 1 s
RESPONSE TIME	< 25 ms	< 40 ms
RT FOR EMERGENCY	< 25 ms	< 40 ms
RECEIVER LINK TYPE	-	WIFI - CANBUS
NUMBER OF PROCESSOR	1	2
NUMBER OF DIGITAL OUTPUT	-	10
NUMBER OF DIGITAL INPUT	-	16
NUMBER OF OUTPUT PWM	-	8
EXTRA AERIAL	OPTIONAL	OPTIONAL
OPERATING - STORAGE TEMPERATURE RANGE	-40 °C - +85 °C	-40 °C - +85 °C
ENCLOSURE PROTECTION RATING	IP 65	IP 65
BODY STRUCTURE	POLYAMID	POLYAMID
SUPPLY VOLTAGE	48-110-2250 VAC or [7-35VAC -10-50VDC]	12 VDC Or 24 VDC
CURRENT POWER	5 W	20 W
OUTPUT RELAY IGNITION CAPACITY	10A 230 V	-
STOP RELAY IGNITION CAPACITY	10A 230 V	-
DIMENSIONS	DEPANDS ON THE MODEL	DEPANDS ON THE MODEL
MAXIMUM WEIGHT	DEPANDS ON THE MODEL	DEPANDS ON THE MODEL

DIGITAL

JPD00001

* 6 movement double step digital output
* Double start button
* Light on/off switch
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPD00021

* 8 movement digital output
* 4 permanent digital output
* Light on/off switch
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPD 00022

* 8 permanent digital output
* Double start button
* Start/ output
* Run output
(The relay that outputs when any button is pressed)

JPD00023

* 6 movement 5 step digital output
* Double start button
* Light on/off output
* 2/1/1+2 tandem or multiple control selecting
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPD00024

* 6 movement 2 step digital output
* Double start button
* Light on/off switch
* 2/2/1/+2 tandem or multiple control selecting
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPD00025

* 18 digital output
* Double start button
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPD00026

* 22 digital output
* Double start button
* Start/horn output
* Run outputtt
(The relay that outputs when any button is pressed)

JPD00028

* 8 movement 2 step digital output
* Double start button
* Light on/off switch
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPD00029

* 12 digital output
* Start/horn
* Run outputt
(The relay that outputs when any button is pressed)

ELFATEK
· E L E K T R O N I K ·

ANALOG

JPA00001

* 6 movement 0-10 analog output
* Double start button
* Light on/off switch
* Run output
(The relay that outputs when any button is pressed)

JPA00021

* 4 analog output
* 2 units 0-10 V analog speed control
* 2/2/1/+2 Ttandem or multiple control selecting
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPA00022

* 6 movement 2 steps digital output
* Double start button
* Light on/off switch
* 2/1/1+2 tandem or multiple control selecting
* Start/horn output
* Run output (The relay that outputs when any button is pressed)

JPA00023

* 2 units 0-10 V analog output
* 14 digital output
* Double start button
* Start/horn output
* Run output
(The relay that outputs when any button is pressed)

JPA00025

* 8 units 0-10 V analog output
* Double start button
* Light on/off switch
* Start/horn output
* Aux button
* Adjustable output options (← slow-fast →)
* 0-1 selector switch
* Run output (The relay that outputs when any button is pressed)

MOBILE

Using EC modules.*
Extra EMC module for more than 8 PWM output. **

MOBILE MACHINE CONTROL 1

* CAN bus (CANopen, CAN J1939,CAN Generic)
Pwm proportional control
* 8-16-32 expandable PWM outputs**
* Digital output
* RTC (Real Time Clock)
* Configurable button and switch
* Non-contact switch (optional fixing applicaiton)
* RFID (Automatic Identification)
* 4.3 " inc colorful display

ANKA SERIES
JOYSTICK REMOTE CONTROL SYSTEMS
www.**elfatek**.com.tr

ELFATEK
• E L E K T R O N I K •
www.**elfatek**.com.tr

EN SERIES RADIO REMOTE CONTROL

EN X, ESX, MID and MAX concepts was specially designed for ease of use. EN Series Remotes are mainly used in construction cranes, overhead travelling cranes and in different kinds of applications. New series can be used in rolling plant, iron & steel, marble and many different industries. The remote body case is designed to stand impacts and harsh environment. Remote buttons are single & double step and can be used with gloves.

Foot-treadle remote control
Code: PEDAL-101

- EN Series are manufactured 2,4,6,8,10 & 12 buttons. EN Series have 4 different models EN-X, EN-ESX,EN-MID and EN-MAX have 250 hours battery life.

- In all series emergency stop button, low battery signal, emegency and status LEDS are available.

- In all remote control models that have removable safety key are only used by authorized person. The iChip allows to continue without interruption if you have plugged into another EN-X, EN-MAX, EN-MAX and EN-MAX models.

- In the **EN-MAX** model, when the "start" button is momentarily pressed it gives the horn output, when the same button is pushed, the receiver switches to the starting position. All models are manufactured in accordance with the directives of the new generation technology SIL3 safety features.

- **EN-ESX, EN-MAX** receiver and transmitter are in continuous communication. If no operation is performed for 3 minutes and the shooting distance of 100 meters is exceeded or the battery is removed, it goes into emergency stop mode

- **EN-MAX** has 3 microprocessors with double safety relays.

- With **EN-MAX** Remote Control Series, safety and sensitivity are at the highest level.

- In **EN-X** remote control models are available for 6, 8, 10 buttons, in addition **EN-ESX** and **EN-MAX** remote control models are available 6, 8, 10, 12 buttons remote control systems.

- All movements of the **EN-X** series remote control models have dual-output.

IMAGINE, DESIGN, MANUFACTURE.

EN SERIES TECHNICAL FEATURES

TRANSMITTER UNIT

MODEL	ESX	MID	MAX	X
FREQUENCY	2.4 GHz I.S.M. BAND			
BUTTON UNIT	6,8,10	2,4,6,8,10,12	2,4,6,8,10,12	6,8,10
NUMBER OF CHANNEL	80			
OPERATING DISTANCE	≈ 100 m			
EMISSION POWER OF THE R.F. SYSTEM	10 mW ERP (INTERNAL ANTENNA)			
AVAILABLE PAIRING ADDRESS	65536			
DELAY TIME ON RECEIVER START	< 1 s			
COMMAND RESPONSE TIME	< 20 ms			
EMERGENCY RESPONSE TIME	< 20 ms			
OPERATING TEMPERATURE RANGE	-40 °C ~ +85 °C			
ENCLOSURE PROTECTION RATING	IP 65			
MATERIAL	POLYAMID			
POWER REQUIREMENTS	3 VDC			
BUTTON DIAMETER	20 MM			
DRAWN CURRENT	10mA			
BATTERY	2xAA BATTERY			
CONTINUOUS OPERATION	≥250 hours			
ADVICED TIME BATTERY LOW SIGNAL	30 min (DURACELL BATTERY)			
BUTTON 2 (INCLUDED BATTERY)	= 277 GR			
BUTTON 4 (INCLUDED BATTERY)	≈ 290 GR			
BUTTON 6 (INCLUDED BATTERY)	= 330 GR			
BUTTON 8 (INCLUDED BATTERY)	= 370 GR			
BUTTON 10 (INCLUDED BATTERY)	≈ 410 GR			
BUTTON 12 (INCLUDED BATTERY)	= 450 GR			

RECEIVER UNIT

FREQUENCY	2.4 GHz I.S.M BAND
NUMBER OF CHANNEL	80
OPERATING DISTANCE	=100 m
ON/OFF UNIT	MODELS HAVE DIFFERENT SIZES
AVAILABLE PAIRING ADRESSES	65536
DELAY TIME ON RECEIVER START	< 1 s
COMMAND RESPONSE TIME	< 20 ms
EMERGENCY RESPONSE TIME	< 20 ms
OPERATING TEMPERATURE RANGE	-40 °C ~ +85 °C
ENCLOSURE PROTECTION RATING	IP 65
MATERIAL	POLYAMID
POWER REQUIREMENTS	48-110-220 VAC or (7-35VAC~10-50VDC)
POWER DEMAND	3.2W MAX.
OUTPUT RELAY CONTACT CAPACITY	10A 230 V
STOP RELAY CONTACT CAPACITY	10A 230 V
SIZES	MODELS HAVE DIFFERENT SIZES
MAX. WEIGHT	MODELS HAVE DIFFERENT SIZES

EN MID SERIES PRODUCTS

201	2 Buttons Single Step Radio Remote Crane Control System
201 -A	2 Buttons Single Step + AUX Output Radio Remote Crane Control System
202	2 Buttons Double Step Radio Remote Crane Control System
202 - A	2 Buttons Double Step + AUX Output Radio Remote Crane Control System
401	4 Buttons Single Step Radio Remote Crane Control System
401 -A	4 Buttons Single Step + AUX Output Radio Remote Crane Control System
402	4 Buttons Double Step Radio Remote Crane Control System
402 - A	4 Buttons Double Step + AUX Output Radio Remote Crane Control System
601	6 Buttons Single Step Radio Remote Crane Control System
601 - A	6 Buttons Single Step + AUX Output Radio Remote Crane Control System
602	6 Buttons Double Step Radio Remote Crane Control System
602 - A	6 Buttons Double Step + AUX Output Radio Remote Crane Control System
601 -S1	6 Buttons Single Step, With 0-1 Selector Switch RRCCS
602 - S1	6 Buttons Double Step, With 0-1 Selector Switch RRCCS
601 - S2	6 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
602 - S2	6 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
801	8 Buttons Single Step Radio Remote Crane Control System
801 - A	8 Buttons Single Step + AUX Output Radio Remote Crane Control System
802	8 Buttons Double Step Radio Remote Crane Control System
802 - A	8 Buttons Double Step + AUX Output Radio Remote Crane Control System
801 - S1	8 Buttons Single Step ,With 0-1 Selector Switch RRCCS
802 - S1	8 Buttons Double Step, With 0-1 Selector Switch RRCCS
801 - S2	8 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
802 - S2	8 Buttons Double Step, With 1-0-2 Selector Switch RRCCS
1001	10 Buttons Single Step Radio Remote Crane Control System
1001 - A	10 Buttons Single Step + AUX Output Radio Remote Crane Control System
1002	10 Buttons Double Step Radio Remote Crane Control System
1002 - A	10 Buttons Double Step + AUX Output Radio Remote Crane Control System
1001 - S1	10 Buttons Single Step, With 0-1 Selector Switch RRCCS
1002 - S1	10 Buttons Double Step, With 0-1 Selector Switch RRCCS
1001 - S2	10 Buttons Single Step, With 0-1-2 Selector Switch RRCCS
1002 - S2	10 Buttons Double Step, With 0-1-2 Selector Switch RRCCS
1201	12 Buttons Single Step Radio Remote Crane Control System
1201 - A	12 Buttons Single Step + AUX Output Radio Remote Crane Control System
1202	12 Buttons Double Step Radio Remote Crane Control System
1202 - A	12 Buttons Double Step + AUX Output Radio Remote Crane Control System
1201 - S1	12 Buttons Single Step, With 0-1 Selector Switch RRCCS
1202 - S1	12 Buttons Double Step, With 0-1 Selector Switch RRCCS
1201 - S2	12 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
1202 - S2	12 Buttons Double Step With 1-0-2 Selector, Switch RRCCS

EN ESX - EN MAX SERIES PRODUCTS

601	6 Buttons Single Step Radio Remote Crane Control System
601 - A	6 Buttons Single Step + AUX Output Radio Remote Crane Control System
602	6 Buttons Double Step Radio Remote Crane Control System
602 - A	6 Buttons Double Step + AUX Output Radio Remote Crane Control System
601 -S1	6 Buttons Single Step, With 0-1 Selector Switch RRCCS
602 - S1	6 Buttons Double Step, With 0-1 Selector Switch RRCCS
601 - S2	6 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
602 - S2	6 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
801	8 Buttons Single Step Radio Remote Crane Control System
801 - A	8 Buttons Single Step + AUX Output Radio Remote Crane Control System
802	8 Buttons Double Step Radio Remote Crane Control System
802 - A	8 Buttons Double Step + AUX Output Radio Remote Crane Control System
801 - S1	8 Buttons Single Step ,With 0-1 Selector Switch RRCCS
802 - S1	8 Buttons Double Step, With 0-1 Selector Switch RRCCS
801 - S2	8 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
802 - S2	8 Buttons Double Step, With 1-0-2 Selector Switch RRCCS
1001	10 Buttons Single Step Radio Remote Crane Control System
1001 - A	10 Buttons Single Step + AUX Output Radio Remote Crane Control System
1002	10 Buttons Double Step Radio Remote Crane Control System
1002 - A	10 Buttons Double Step + AUX Output Radio Remote Crane Control System
1001 - S1	10 Buttons Single Step, With 0-1 Selector Switch RRCCS
1002 - S1	10 Buttons Double Step, With 0-1 Selector Switch RRCCS
1001 - S2	10 Buttons Single Step, With 0-1-2 Selector Switch RRCCS
1002 - S2	10 Buttons Double Step, With 0-1-2 Selector Switch RRCCS
1201	12 Buttons Single Step Radio Remote Crane Control System
1201 - A	12 Buttons Single Step + AUX Output Radio Remote Crane Control System
1202	12 Buttons Double Step Radio Remote Crane Control System
1202 - A	12 Buttons Double Step + AUX Output Radio Remote Crane Control System
1201 - S1	12 Buttons Single Step, With 0-1 Selector Switch RRCCS
1202 - S1	12 Buttons Double Step, With 0-1 Selector Switch RRCCS
1201 - S2	12 Buttons Single Step, With 1-0-2 Selector Switch RRCCS
1202 - S2	12 Buttons Double Step With 1-0-2 Selector, Switch RRCCS

EN X SERIES PRODUCTS

X6	6 Buttons Double Step Radio Remote Crane Control System
X6 - A	6 Buttons Double Step + Aux Output Radio Remote Crane Control System
X6 - S1	6 Buttons Double Step With 0-1 Selector Switch RRCCS
X6 - S2	6 Buttons Double Step With 1-0-2 Selector Switch RRCCS
X8	8 Buttons Double Step Radio Remote Crane Control System
X8 - A	8 Buttons Double Step Radio Remote Crane Control System
X8 - S1	8 Buttons Double Step With 0-1 Selector Switch RRCCS
X8 - S2	8 Buttons Double Step With 1-0-2 Selector Switch RRCCS
X10	10 Buttons Double Step Radio Remote Crane Control System
X10 - A	10 Buttons Double Step Radio Remote Crane Control System
X10 - S1	10 Buttons Double Step With 0-1 Selector Switch RRCCS
X10 - S2	10 Buttons Double Step With 1-0-2 Selector Switch RRCCS

ELFATEK ELEKTRONİK LTD. ŞTİ.

Ankara Yolu Üzeri Modesa San. Sit. 10735 Sk. N0 : 10 Karatay / Konya / TÜRKİYE
Tel : +90 332 345 38 83 (Pbx) Fax : +90 332 345 38 84
Mail : elfatek@elfatek.com.tr Mail : export@elfatek.com.tr

V21.0218