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## Flexible Remote Control (FRC) Technology™ Transmitter

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### GENERAL DESCRIPTION

The **GS 702** transmitter controller has been designed in order to meet the requirements of replacement remote control makers. It's structure is based on Application Specific Programmable Micro-controller with a super parallel architecture implemented by means of CMOS EPROM technology.

**GS 702** replaces most of the original transmitter ICs, used nowadays. Additionally, many parameters and functional features have been dramatically improved. A typical remote control implementation, shown on Fig 1 uses only four external components, and power consumption in stand-by mode is in the range of 100nA.

In order to facilitate application project design for different type of protocols, a FRC CAD system and Chip Programmer are available. The CAD library contains more than 30 of most popular protocols, at present, and new ones could be developed and added by the user.

### GS 702 Transmitter Pin Description

Pin No	Symbol	Description
1	OSC0	Oscillator Output
2	OSC1	Oscillator Input
3-10	OUT0-OUT7	Key Outputs
11	VPP	Programming Voltage
12	GND	Ground
13	WRD	Terminal for Test and EPROM Programming
14	PGM	Terminal for Test and EPROM Programming
15-22	IN0-IN7	Key Inputs, Internally Pull Down to GND
23	REM	Remote Output
24	VCC	Positive Supply

### Electrical Characteristics (T<sub>a</sub>=25° C)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	VCC		2.2		3.3	V
Supply Current	ICC	VCC=3V,Standby		0.1	1	uA
Output Current	IREM	VCC=2.2V	10			mA
Input Pull Down R	Rio	VCC=3V			20	kOhm

### GS 702 Specific Characteristics

- Key matrix: - 64 (8 X 8) buttons.
- Ceramic resonator used: - 400 ÷ 550 kHz
- Transmission modes: - flash or modulated.
- Programming Time: - 3 ÷ 5 sec.
- Packages available: - DIL24, SOP24 and COB (Chip-On-Board)

## FRC CAD and Programmer features

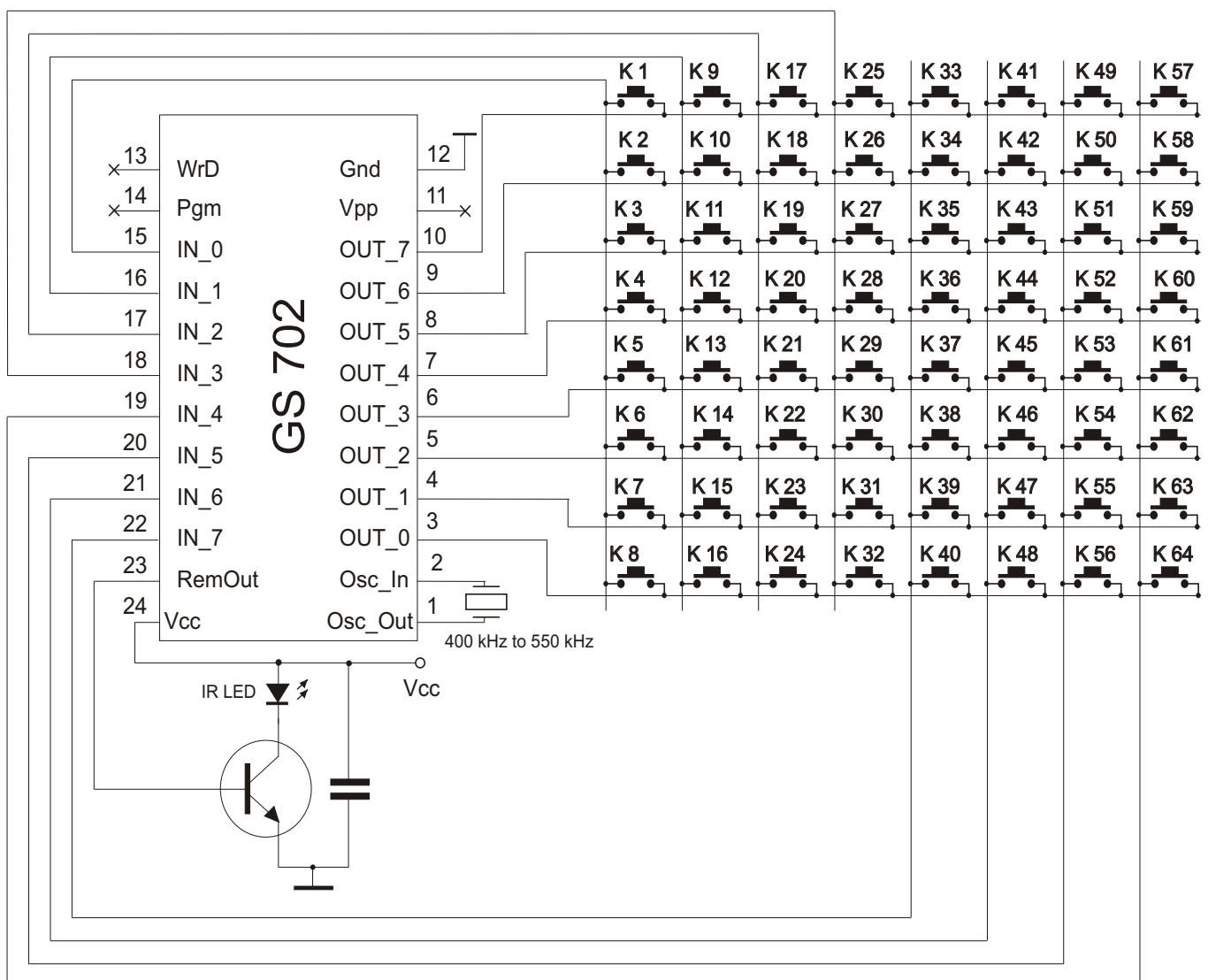
Every FRC remote control project contains three separate CAD sections, providing data for:

- PCB key layout,
- Protocol description (with all timings specification) and
- Command Address/ Data info

Programmable parameters: Key-type (Normal, Shift or Special), Modulation type, Resonator frequency, Bit-time, Duty factor, etc.

The implemented FRC CAD project is downloaded to the Chip Programmer and **GS702** programming is performed in an autonomous (disconnected from the PC) mode.

## Application Scheme of GS702 Transmitter Controller



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