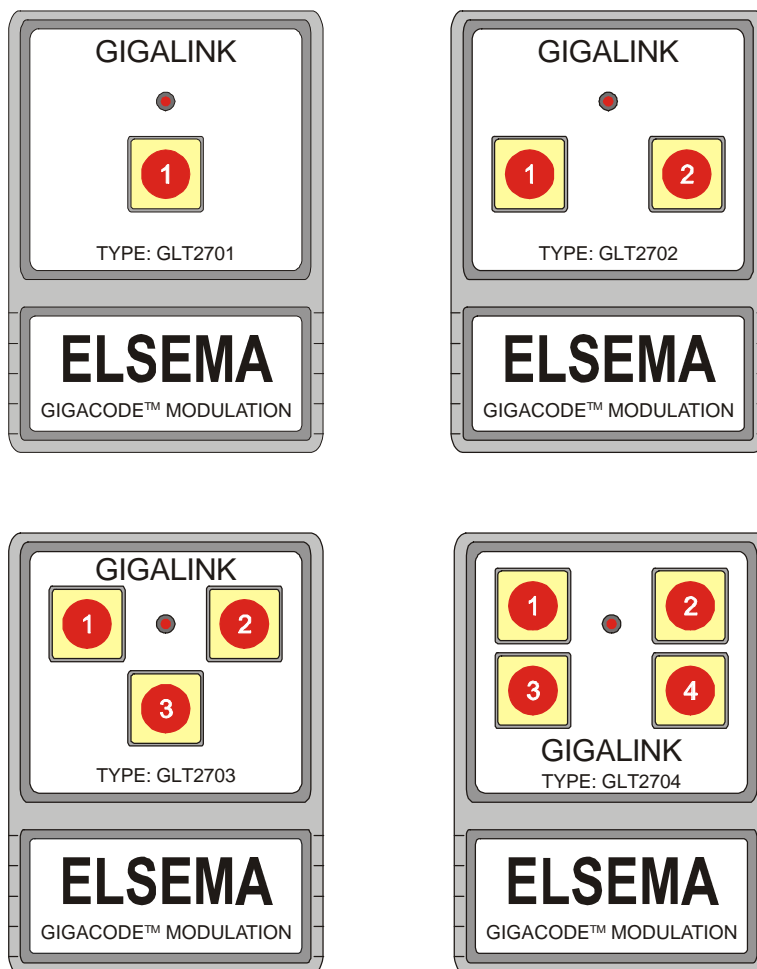


## GLT2700/1/2/3/4 27MHz HAND HELD GIGALINK™ TRANSMITTERS

The hand held GIGALINK™ transmitters are the most advanced Remote Control technology available in the world today. GIGALINK™ is an invention that has revolutionised the entire Remote Control technology including Elsema's earlier version of FMT- ... and FMR- ... series. The GLT2701/2/3/4 state-of-the-art invention brings a new dimension in the world of Remote Control technology in domestic, commercial and industrial applications.



The innovative microcontroller technology replaces the traditional dip switch coding which eliminates any possible code grabbing. Special features such as **over four billion code combinations and the ability to program any number of transmitters to a receiver** adds to the most advanced and secure Remote Controls available.

The hand held GIGALINK™ transmitters have a microcontroller in-built single and channelised code programming system that provides flexibility in programming each channel to different receivers. Each transmitter can store to its EEPROM, up to four random channels allowing the user to program each channel from different single channel receivers. This is achieved when single code programming the transmitter channels from a GLR2701, which is a single channel GIGALINK™ receiver. If the transmitter is single code programmed from a multi channel receiver, the selected receiver's channel is programmed to the selected transmitter channel. The channels can be selected by using the dip switches on the receiver and by pressing the appropriate channel button on the transmitter.

Channelised code programming programs all the channels, from a multi channel receiver, to the multi channel transmitter. That is, channel one on the transmitter activates channel one on the receiver and alternatively. Channelised system can be either used as simple on/off functions or for several channels to operate simultaneously such as dual or multi action control for example crane transmission control.

The transmitter can be single or channelised code programmed without power connected.

### **Single Code Programming**

This is used for programming one channel at a time to the transmitter. To single code program a transmitter read receivers setup instructions.

### **Channelised Code Programming**

This is used to program all channels from a multi channel receiver to the multi channel transmitter. To channelise code program a transmitter read receivers setup instructions.

### **Operating Distance**

An operating distance (in conjunction with our GLR series receivers) of 350 metres is possible.

The operating distance depends upon the receiver antenna and location. An independent test revealed the following ranges:

<b>Range (Metres)</b>	<b>Receiver Antenna</b>	<b>Receiver Type</b>
50	250 mm Long Wire	GLR....
200	1000 mm Long Wire	GLR....
350	ANT27M	GLR....

Range tests were done in an open area test site with line-of-sight operation and the receiver antenna wire was fixed vertically, away from any metal objects.

### **Applications**

The code programming becomes a powerful feature that allows the hand held transmitters to be used in many diverse applications such as security, gate operation, panic buttons, multiple on/off functions etc.

### **Battery or DC Supply**

Battery operation is optimised using the built-in battery monitoring system. The battery monitoring system alerts the user when the battery level falls below the low battery voltage. The 1 Hz flash from the LED during a transmission indicates low battery. This is an indication that replacement of a battery is necessary.

### **Normal Operation**

The LED flickers at 12.5Hz during normal operation.

### **Channels**

The hand held transmitters are available with 1, 2, 3 and 4 channels.

### **Custom made front Membrane**

Membrane is the front label with the channel etched/printed to it. Customers can purchase the GLT2700, which is a hand held GIGALINK™ transmitter without the front membrane. This enables the customers to fit their custom made membrane that can be a 1, 2, 3 or 4 channels. This has the advantage of customers only stocking one model to function as a 1, 2, 3 and 4 channel. Details of membrane dimensions are given on the following page. Customers can even use Elsema's membrane tools to manufacture their own membranes.

**Continuous or Burst Transmission**

The hand held transmitters can be purchased with a choice of continuous or burst transmission.

Continuous transmission will transmit as long as the channel is activated.

Burst transmission will transmit for a predetermined time when a channel is activated. Burst transmission locks on a transmission, which ensures a fail-safe transmission from a short activation of a channel. Burst transmission is also required in certain countries where limited transmission time is allowed.

**Unique Code System**

The microcontroller EEPROM allows large volume users to have a unique code. This enables Elsema to offer everyone “your own” radio control.

**Case**

The hand held GIGALINK™ transmitters are supplied with a case. There is also sufficient space on the rear of the case to place additional stickers such as your telephone contact, local authorities approval numbers etc.

# REGULATORY COMPLIANCE STATEMENTS

## **American Users**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## **FCC Notice**

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the computer and receiver.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

## **Canadian Users**

This Class [B] digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe [B] respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## **European Users**

This information Technology Equipment has been tested and found to comply with the following European directives:

- ETS 300 683
- I-ETS 300 220

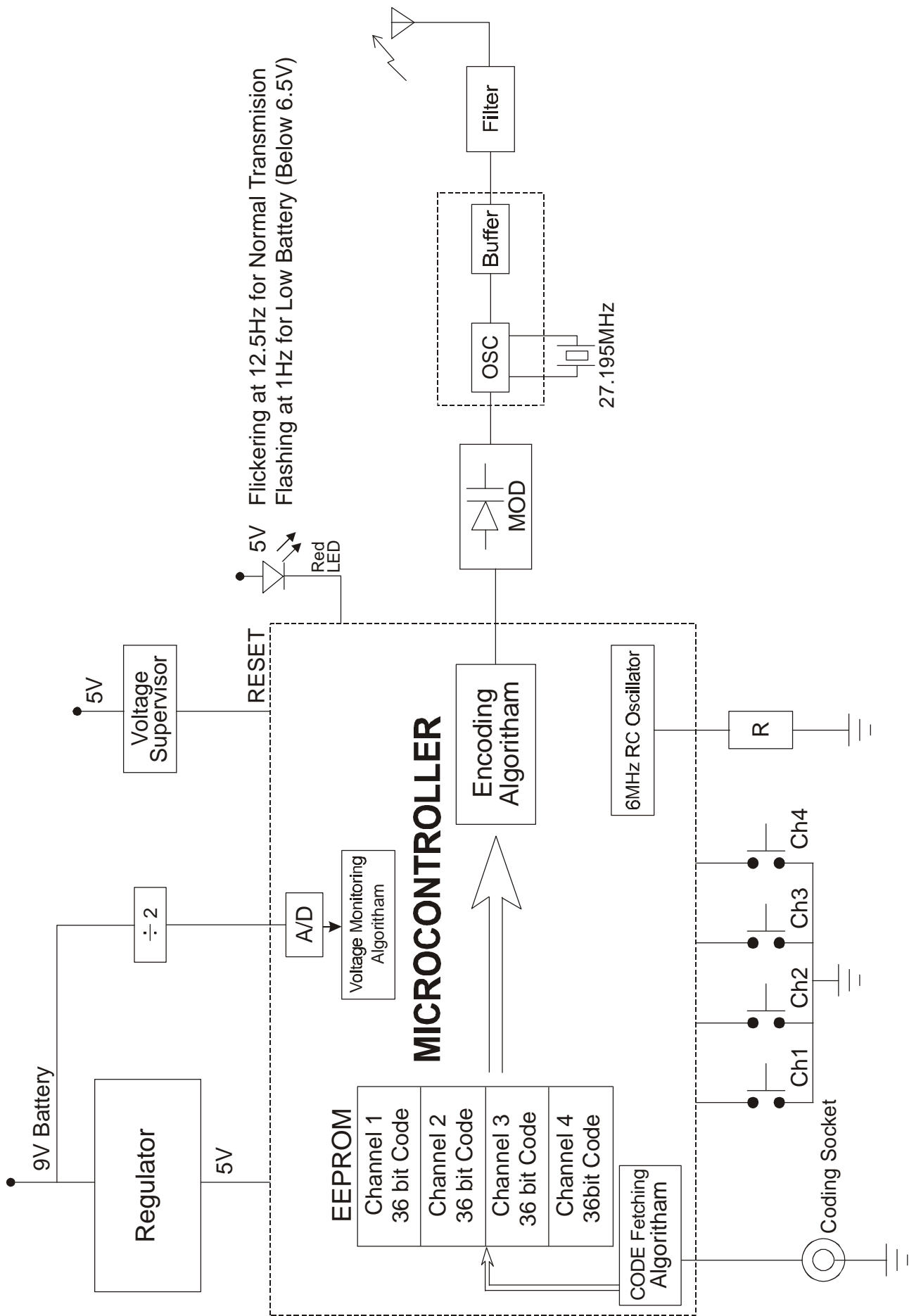
## **Australian and New Zealand Users**

This device has been tested and found to comply with the limits for a Class [B] digital device, pursuant to the Australian/New Zealand standard AS 4268.2 (1995) set out by the Spectrum Management Agency.

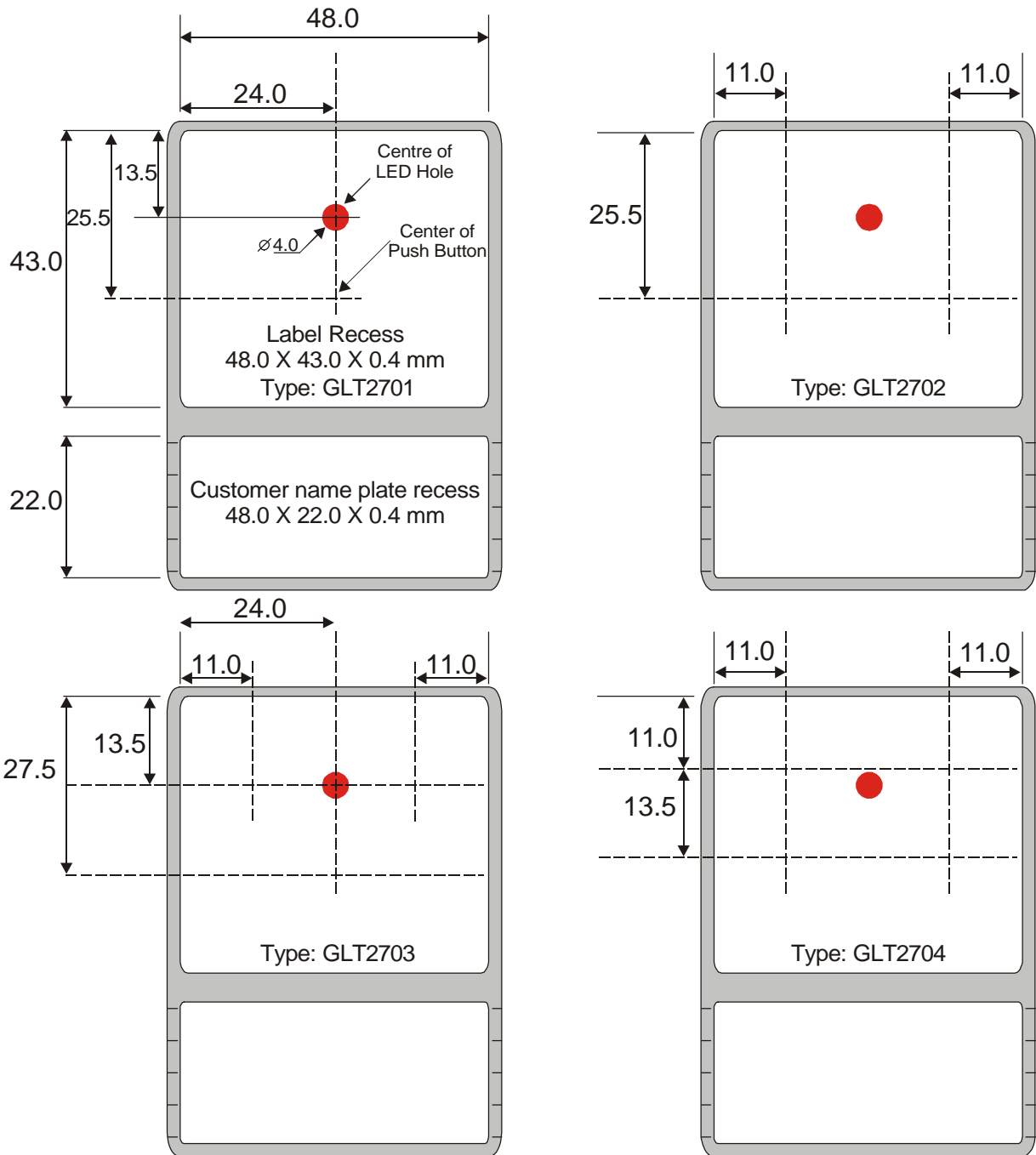
## TECHNICAL DATA ON GLT2701/2/3/4

POWER SOURCE :	9-Volt Battery (Applied to the battery clip)
CURRENT CONSUMPTION :	Maximum 45mA at 8VDC supply (Only when transmitting).
STANDBY CURRENT :	10 uA (typical)
<u>TRANSMISSION MODES</u> CONTINUES :	Transmits as long as the channel is activated. Minimum transmission time is 640 msec.
BURST (B version) :	Transmits one 640 msec burst for each channel activation, even if channel is activated for less than 640msec.
BATTERY MONITOR :	LED flashes at 1 Hz, during transmission, when battery voltage is at 6.5 volts (flat 9 volt battery).
NORMAL OPERATION :	The LED flickers at 12.5Hz during normal operation.
OPERATING FREQUENCY :	27.195MHz (Other frequencies available on 27.045, 27.145 and 27.455 MHz. The 27.455 frequency is not available for Australia).
CARRIER FREQUENCY TOLERANCE :	Crystal controlled 30 parts per million.
OPERATING TEMPERATURE RANGE :	-5 to +50°C
RADIATED R.F. POWER OUTPUT :	2.23µW (CKC test result)
ANTENNA :	Built in 50mm long dilec rod.
TYPE OF EMISSION :	Narrow-band-width Frequency Modulation (5K00F1D)
FREQUENCY DEVIATION LIMITING :	1600 - 1900 Hz non-return to zero.
MODULATION FREQUENCY :	1.8 kHz (1.737Kb) (15% tolerance).
SPURIOUS TRANSMISSION :	At least -60dB/carrier
NECESSARY BAND WIDTH :	+ - 2.5 kHz
DIGITAL CODING SYSTEM :	Microcontroller based 96-bit word.
CODE COMBINATION :	4,294,967,296
DIGITAL CHANNELS :	1, 2, 3 or 4 channels. The type of membrane label determines the number of channels. Customers can fit custom-made membrane labels.
DIMENSION :	81 X 56 X 24 mm
WEIGHT :	51 grams excluding battery
USABLE RECEIVERS :	GLR ... series
USEABLE OPERATING RANGE :	Up to 350 metres. Depends on receiver antenna and location.

# BLOCK DIAGRAM



## DIMENSIONS FOR CUSTOMISED LABELS



Elsema will provide (free of charge) blank membranes for customers who want to design their own labels.

Recommended label material is polyester autotex F200 and buttons to have tactile action with 10.7mm round pillow emboss.

Label Supplier :  
 Permark Industries Aust (1999) Pty Ltd  
 Telephone: (61) 2 9911 6656  
 Fax : (61) 2 9819 6517  
 Email : [amrat@permark.com.au](mailto:amrat@permark.com.au)