



RC917/TR02

Developed for demanding environments

Scanreco's RC917 / TR02 is built and designed for the toughest and most demanding of environments. Scanreco can hereby offer the market of crane and machine operators an extremely easy to use radio remote control retaining speed, precision, and control with the maximum of safety.

Behind the development of the radio transceivers lies the idea

of providing a product with a high degree of reliability, user-friendliness, and easy upgrade for cable systems or other data radio applications.

The product family includes different transceivers and receivers offering a variety of choice depending on the area of use. These products are based on a modular architecture, which makes them extremely flexible to customize and adapt according to the customer's needs.

The products – which are in high demand – are mainly mounted on cranes and mobile machines. Our customers are some of the world's largest and most challenging crane and machinery manufacturers. Thousands of cranes and machines containing Scanreco's radio products are in use worldwide.

Our products are deployed everywhere, from truck cranes laying heating pipes in Stockholm to lifting oil pipelines in Russia and setting in place concrete sections in Singapore.

Scanreco – freedom in a box

Our customers development is our own development. This enables us to offer:

- Customer-specific solutions
- Industrial know-how
- Expertise and experience
- Innovative capacity
- Nimble organisation
- Quality
- Delivery precision
- Service

www.scanreco.se

How to use the TR02 for user defined multi purpose use

The control and power connector is a standard 2.54mm, 8way pin row.
The functions of the pin s are as follows:

Pin 1: Power supply and signal ground.

Pin 2: Power supply positive terminal.
Accepts 6 to 8VDC. 7.2VDC nominal.

Pin 3: Data input.

Pin 4: Clock input.

Pin 5: Load signal.

Pin 6: Transmit data input. TTL levels.

Pin 7: Transmit/receive input signal. TTL levels. Logic level " 1" on this pin and a RSSI value below 95dBm will put the module in transit mode. If the RSSI value exceeds 95dBm t

he module enters receive mode. Logic level "0" will force receive mode.

Pin 8: Received data output. TTL levels.

Pins 3 to 5 make together an SPI port for receiving channel information. Upon start up the mother board on which the module is mounted will send the channel frequency information on this port. The module will then enters receive or transmit mode depending on the status of pin 7. In receive mode the received data will appear asynchronously on pin8. In transmit mode the asynchronous data on pin 6 will be buffed and fed to modulator at the same time the output amplifier will be enabled.

The high power version RC917FHH has the output power less than 18dBm when it uses in the hand held remote control units. The max output power 18dBm of hand held units is programmed under production at the factory and not possible to change under using by the customer.

There are two antenna connectors, which cannot be used simultaneously.

The antenna types used with the module are presented in the table:

N	Antenna type	Details	Manufacture	Part number	Connector	Gain
1	Internal wire $\lambda/4$	8cm length, Stranded $\emptyset 1,2$ mm conductor, $\emptyset 2,2$ mm total	Scanreco	44374	Soldered	1,5dBi
2	Internal dipole antenna	Total length 16cm, coax cable RG316	Scanreco	47146	Soldered	2,5dBi
3	External $\lambda/4$ Helix	Total height 12cm	Scanreco	47938	RP-SMA	2,8dBi
4	External $\lambda/4$ whip	Total length 82mm	Scanreco	47123/382- 4179	TNC	2,6dBi
5	External Right Angle $\lambda/4$	Total length 45 mm	Jinchang (or similar: Taoglas TG.22.0112, Pulse W1900/1902, Antenna Factor ANT-916-CW)	JC-GSM-000-55- SMAGSM	SMA	3,5dBi

In case of internal antenna it will be always located at least 2,5 cm from the nearest host enclosure wall.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning

The external antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other transmitter

Warning

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

Typical customer application
as an example



NOTE: if you need assistance or customer
defined application, please contact
Scanreco customer support.

Instruction how to upgrade all Scanreco RC 917 systems,
Note: Pictures show a typical RC 917 system but upgrade
process is valid for all types of RC 917.

- 1/ Open control pult and locate place
for radio modul *



- 2/ Install TR02 intended for control pult.
Tighten the supplied screws*, normally 4

Note: Different
type of holders
for wire antenna
is supplied
depending type
of RC 917 system



- 3/ Reassembly control pult and continue to step 4. .

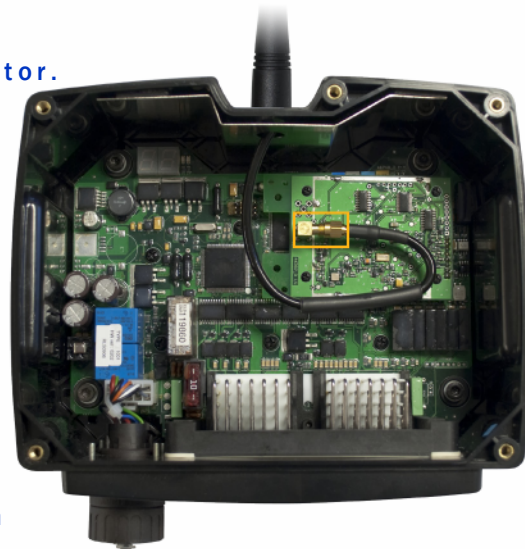
4/ Open the receiver box
locate place for radio module *



5/ Install TR02 intended for
Receiver box and tighten
supplied screws*, normally 4.



6/ Install antenna cable
in appropriate inlet on box
and connect to TR02 the SMA connector.



7/ Reassembly receiver box,
go to step 8.

8/ Start up system and according
to system manual RC 917,
restart and pair system without
cable control attached.

Note: The SW in RC 917 will automatic
install and identify your upgraded system
for Radio Remote Controller.

This procedure is valid for all RC 917 intended to use with RC 917

10/ Upgrade procedure is done and customer are
now able to enjoy a Radio Control System.