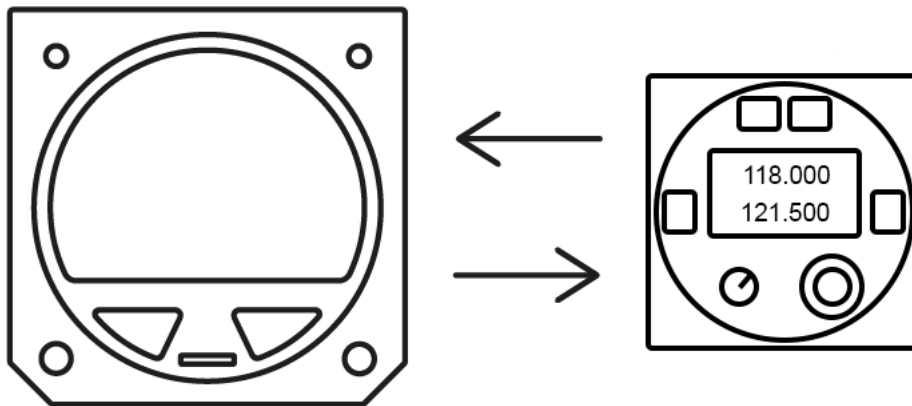


## Radio transceiver connections



### *Connection diagrams*

- LX navigation -

February, 2021

# Document information

## 0.1 Abstract

This document provides information about connecting radio transceivers to LX devices. The installation manual for each device, dataport and additional info can be found on [www.lxnavigation.com](http://www.lxnavigation.com).

## 0.2 Document status

**Document status: PUBLIC**

Document status	Explanation
Internal	Intended only for LX navigation staff
Public	Available publicly to all
Personal	Intended for a specific person and/or company, noted on this page
Dealer	Intended for a specific dealer, noted on this page
Manufacturer	Intended for a specific manufacturer, noted on this page

## 0.3 List of applicable products

Device	Version	Build
LX Era 57	V1.6	171
LX Era 80	V1.6	171
LX Eos 80	V1.6	171
LX 10k	V1.6	171
LX iris EFIS	V1.6	171

## 0.4 Revision history

Document name	Document revision	SW version	Build	Date	Revised by	Approved by	Notes
LX_RCD	R1	n/a	n/a	19.2.2021	A.S.	N.S.	L <sup>A</sup> T <sub>E</sub> X edition



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# Protocol

All radio transceivers are connected to LX device via User port according to instructions in this manual.

Communication is implemented using serial interface. Following are the communication parameters. Normally only baud rate is required to be set on LX device. For setting instructions check your LX device user manual.

Baud rate: Check table below

Data bits: 8

Stop bits: 1

Parity: none

Radio	Baud rate
KRT2	9600
Becker	9600
Trig	9600
Air Control Display	4800 - 57600*

\* According to ACD Instalation manual: ACD-57 accepts different data rates. ACD-57 automatically adjusts to the current data rate present on its serial inputs, if one of the following: 4800, 9600, 19,200, 28,800, 38,400, 57,600 baud.

# Connecting KRT2 transceiver

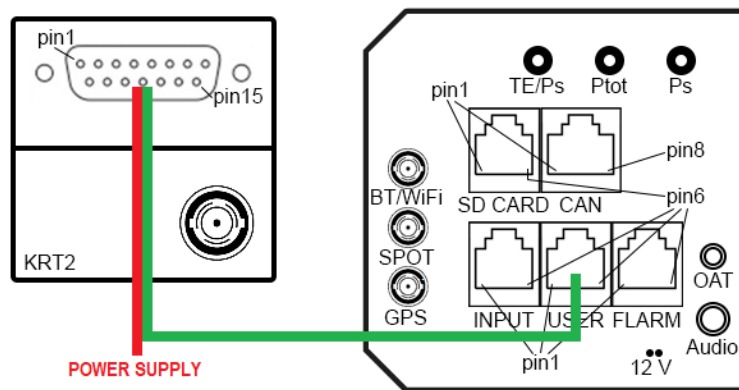


Figure 1. KRT2 connection diagram

Figure 1 shows two devices: radio transceiver (left) and LX Era (right). On radio transceiver use 15 pin D-Sub connector. On LX device use User port. For power supply use pins 1 (ground) and 8 (power) on KRT2. Power supply used must provide direct current between 9 and 28 Volts. Table below shows connection of individual wires.

KRT2 pin	Description	User port pin
1	Ground	6
2	RS232 TX	4
13	RS232 RX	5
8	Power (9-28 VDC)	NC*

\*NC = not connected on user port

For physical location of pins on User port check your LX device user manual.

# Connecting Becker transceiver

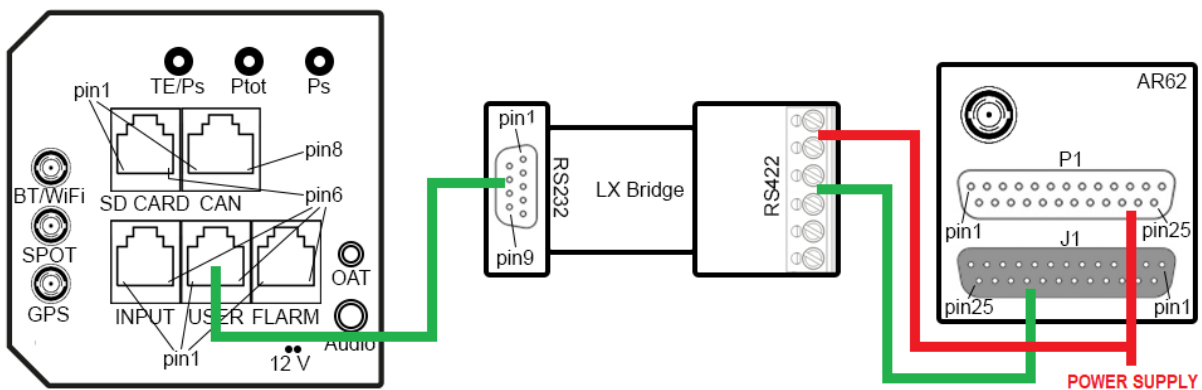


Figure 2. Becker connection diagram

Figure 2 shows three devices: LX Era (far left), LX bridge adapter (in the middle) and radio transceiver (far right).

On radio transceiver use P1 connector for power supply and J1 connector for communication with LX device via LX bridge. LX bridge has two connectors (RS422 and RS232). Use RS422 for connection to radio transceiver and RS232 for connection to User port on LX device. LX Bridge also need power supply. Normally we use same power supply (12 V DC) for both Becker transceiver and LX Bridge.

Tables below show connection of individual wires.

Transceiver P1 pin	Description
12	Power (12 V DC)
13	Ground

Transceiver J1 pin	LX bridge RS422 pin
7	RX+
8	TX+
14	RX-
15	TX-
	GND
	5-12V



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LX Bridge RS232 pin	Description	User port pin
2	RS232 TX	4
3	RS232 RX	5
5	GND	6

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For physical location of pins on User port check your LX device user manual.

# Connecting Trig transceiver

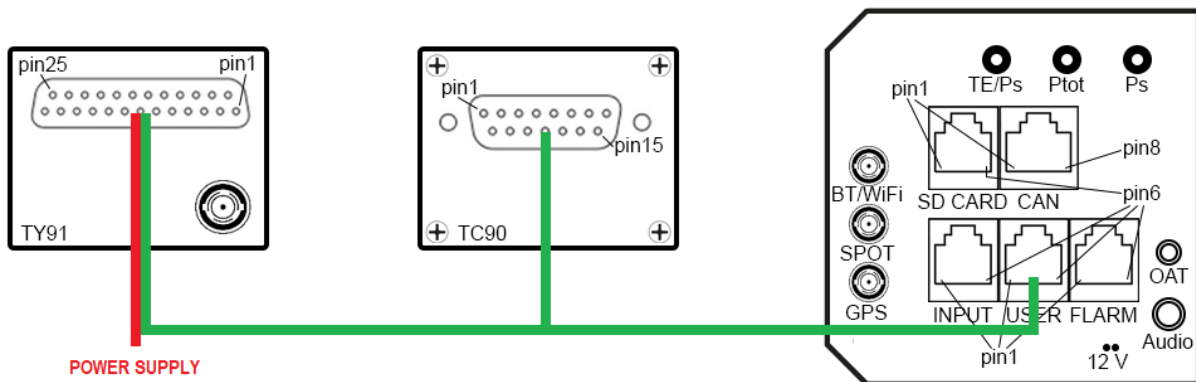


Figure 3. Trig connection diagram

Figure 3 shows three devices: transceiver (far left), controller (in the middle) and LX Era 80 (far right).

On radio transceiver use 25 pin D-Sub connector. On controller use 15 pin D-Sub connector. On LX device use User port.

For power supply use pins Power (24 on transceiver) and Ground (9 or 19 on transceiver). Power supply used must provide direct current between 11 and 33 Volts. Table below show connection of individual wires.

Transceiver pin	Description	Controller pin	User port pin
3	TMAPA	2	
4	TMAPB	3	
9	Ground	1	
12	Controller Power	9	
13	Power ON	8	
19	Ground	4	6
24	Power (11-33 VDC)		
	RS232 TX	5	4
	RS232 RX	6	5

For physical location of pins on User port check your LX device user manual.



# Connecting Air Control Display

Following is the instruction how to connect ACD to LX device, while ACD is connected to KRT2 radio transceiver. For connection of ACD and other transceivers refer to ACD installation manual. Connection between ACD and LX device stays the same no matter which transceiver is used.

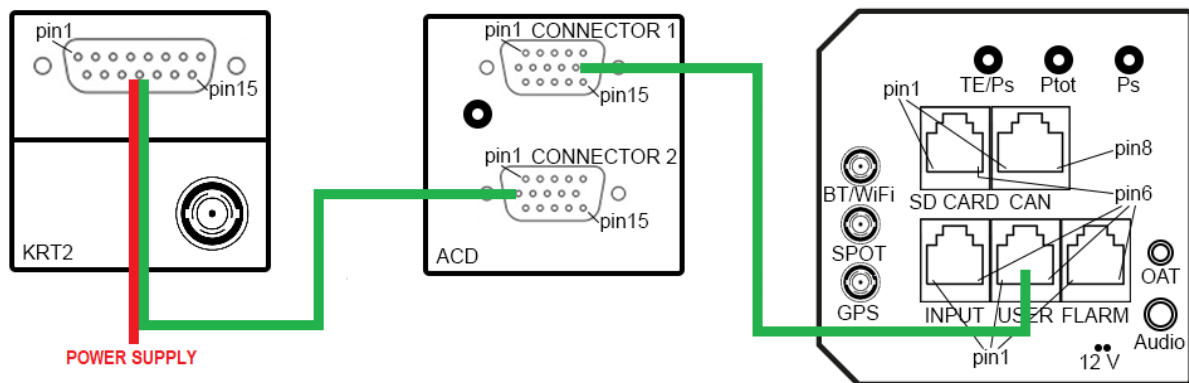


Figure 4. ACD connection diagram

Figure 4 shows three devices: KRT2 transceiver (far left), ACD (in the middle) and LX Era 80 (far right).

To connect KRT2 and ACD use 15 pin D-Sub connector on KRT2 and connector 2 (D-Sub 15 pin HD) on ACD.

For power supply use pins Ground (1 or 9 on KRT2) and Aircraft Power (8 on KRT2). Power supply used must provide direct current between 11 and 28 Volts (requirement by ACD: 11-31 VCD, requirement by KRT2: 9-28 VDC).

Table below shows connection of individual wires.

KRT2 pin	Description	ACD connector 2 pin
1	Ground	5
2	RS232 RX	2
13	RS232 TX	3
8	Aircraft Power	1
9	Ground	14

To connect ACD and LX device use connector 1 (D-Sub 15 pin HD) on ACD and User



port on LX device. Table below shows connection of individual wires.

ACD connector 1 pin	Description	User port pin
2	RS232 RX	5
3	RS232 TX	4
14	Ground	6

For physical location of pins on User port check your LX device user manual.

NOTE: ACD does not respond to radio transceiver related messages while transceiver is not connected. As a consequence transceiver has to be connected at all times to test communication between LX device and ACD.

NOTE: Please reference ACD user manual for configuring ACD. Be aware that adequate license might be required.

# Contact

**Headquarters**

LX navigation d.o.o.  
Tkalska ulica 10  
SI-3000 Celje  
Slovenia

**VAT ID**

Company is registered in Slovenia,  
EU under the VAT ID: SI40539601

**Webpage**

[www.lxnavigation.com](http://www.lxnavigation.com)

**Phone**

+386 (0)3 490 46 70

**Fax**

+386 (0)3 490 46 71

**Sales**

[sales@lxnavigation.com](mailto:sales@lxnavigation.com)

**Support**

[info@lxnavigation.com](mailto:info@lxnavigation.com)