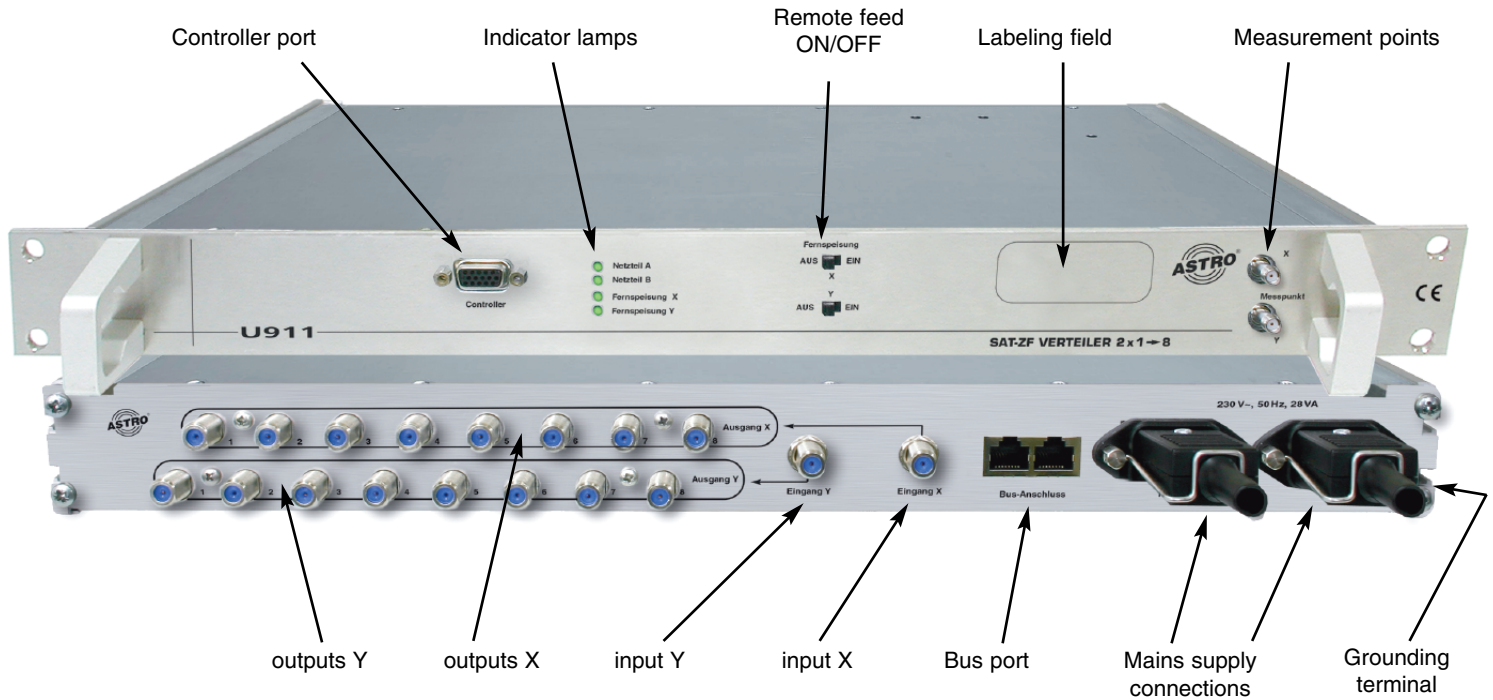


**U 911 ... 946**

**ACTIVE SAT DISTRIBUTION FIELD**

# Illustrations

front view U 911



rear view U 911

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**1 Pictograms and safety information**

Pictograms are symbols which have a defined meaning. You will encounter the following pictograms in these operating and installation instructions:



This symbol is used to warn about situations in which there is a risk of fatal injury due to dangerous electrical voltages or as a result of failure to comply with these instructions.



This symbol is used to warn about various risks to health, equipment/materials or the environment.



This symbol is used to indicate general information.



Recycling symbol: all of our packaging materials (cardboard packaging, package inserts, plastic film and plastic bags) can be fully recycled.



Electronic equipment is not household waste – in accordance with directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 27<sup>th</sup> January 2003 on used electrical and electronic equipment, it must be disposed of properly. At the end of its service life, take this unit for disposal at a relevant official collection point.

**2 Hazard warnings and safety information**

**2.1 Installation information**

The device must only be installed in a dry room.



**Assembly location: indoor room**

## 2 Hazard warnings and safety information



The device must not be exposed to splashing or dripping water. Objects filled with a liquid must not be placed on the device.

In the event of condensation, wait until the device is completely dry.

The permissible ambient temperature range is 0...50°C.

The equipment must only be installed in rooms in which it is ensured that the required ambient temperature conditions are met even under fluctuating climatic conditions.



**Warning:** Please pay special attention to ensuring that the ambient temperature requirements are met if the unit is installed in a loft or attic space.

2.2

### Opening the housing

**Important – please note the following before opening the device:**

#### Disconnect the mains plug.

(Take care when working on the power supply unit. Some components may still carry a voltage after disconnection from the mains and could cause an electrical shock if touched.)

**Never perform any service repairs during a thunderstorm.**

The housing must only be opened by an authorized specialist who has been certified by the Chamber of Commerce and Industry (master workshop). The device must only be repaired by an authorized specialist who has been certified by the Chamber of Commerce and Industry (master workshop), or alternatively by sending it back to ASTRO together with a detailed description of the fault.



## 2 Hazard warnings and safety information

The power cord(s) must only be replaced by equivalent genuine ASTRO replacement power cord(s).

Fuses must only be replaced with replacement fuses of the same type and with the same ratings and melting characteristics.



### Important:

Compliance must be ensured with:  
DIN VDE 0701 – parts 1 and 200, servicing  
EN 50 083 – part 1, safety requirements

2.3

### Equipotential bonding / grounding

The device must be properly grounded and installed in accordance with EN 50 083 – part 1.

The requirements laid out in EN 50083 – part 1 and the national legislation relating to IT/TT power supply networks must be complied with

**Operation of the device without a protective ground connection, proper grounding of the device or equipotential bonding is not permitted.**



#### Different type designations

Input impedance: 75 Ω Output impedance: 75 Ω

- U911 → 2 x 1 in 8 with two power supply units
- U912 → 2 x 1 in 8 with one power supply unit
- U913 → 2 x 1 in 8 with no power supply unit
- U914 → 1 x 1 in 16 with two power supply units
- U915 → 1 x 1 in 16 with one power supply unit
- U916 → 1 x 1 in 16 with no power supply unit

Input impedance: 50 Ω Output impedance: 50 Ω

- U 921 → 2 x 1 in 8 with two power supply units
- U 922 → 2 x 1 in 8 with one power supply unit
- U 923 → 2 x 1 in 8 with no power supply unit
- U 924 → 1 x 1 in 16 with two power supply units
- U 925 → 1 x 1 in 16 with one power supply unit
- U 926 → 1 x 1 in 16 with no power supply unit

Input impedance: 50 Ω Output impedance: 75 Ω

- U 931 → 2 x 1 in 8 with two power supply units
- U 932 → 2 x 1 in 8 with one power supply unit
- U 933 → 2 x 1 in 8 with no power supply unit
- U 934 → 1 x 1 in 16 with two power supply units
- U 935 → 1 x 1 in 16 with one power supply unit
- U 936 → 1 x 1 in 16 with no power supply unit

Input impedance: 75 Ω Output impedance: 50 Ω

- U 941 → 2 x 1 in 8 with two power supply units
- U 942 → 2 x 1 in 8 with one power supply unit
- U 943 → 2 x 1 in 8 with no power supply unit
- U 944 → 1 x 1 in 16 with two power supply units

U 945 → 1 x 1 in 16 with one power supply unit

U 946 → 1 x 1 in 16 with no power supply unit

The different variants may vary slightly from the descriptions provided in the operating instructions in terms of their operation.

Other special types available on request.

## 4. Programming the SAT distribution field with the KC 3

### 4.1 Fundamentals

After plugging in the KC 3 programming device the Start menu will initially appear. The software version number is displayed..

**Please quote this number whenever contacting our customer service department.**

The Start menu can only be accessed again later on by unplugging and replugging the KC 3.

After plugging in the KC 3, you can press the “Menu Read” button first to view additional data for the device (no. of LNC inputs, redundant power supply unit yes/no). Here, you can use the ↑ and ↓ cursor keys to go to row four and access the menu for

#### Setting up a device password:

Use the ← or → cursor keys to activate the password function. After pressing the “OK Store” button you will be asked to enter the new password. If the password function is active then it will not be possible to save changes without the password. Please contact the manufacturer if you cannot remember your password.

After plugging in the KC 3, you can use the ← or → cursor keys to access the menu for adjusting the parameters of the SAT distribution field.

### 4.2 Setting the bus address

After plugging in the KC 3, press the ← or → cursor keys to access the menu for setting the bus address. Then press the ↑ or ↓ cursor keys to go to the third row of the menu, where you can use the ← or → cursor keys to select a bus address value between 31 and 50. Then press “OK Store” to save the selected settings. The message “Data saved” will appear for about 1 second.

### 4.3 Programming the SAT inputs

After plugging in the KC 3 and pressing the ← or → cursor key twice you will go to the menu for setting the bus address and on to the menu for programming the X input of the SAT distribution field. You can then use the ↑ or ↓ cursor keys to go to the second row of the “X input” menu for

#### Adjusting the attenuation

with the ← or → cursor keys in increments of 0.5 dB. The attenuation can be set to a range from 0 to 16 dB. Press the button “OK Store” to save the changes made. The message “Data saved” will appear for about 1 second. If you press the button “Menu read” in the second row as well then this will take you to the menu for

#### Activating the 7 dB slope equalization:

The equalization can be activated or deactivated by pressing the ← or → cursor keys. Here again you need to press “OK Store” to save the changed settings.

### 4.4 Monitoring of the remote powering / alarms

The remote powering which can be activated on the front panel of the device and can also be monitored:

Use the ↑ or ↓ cursor keys to go to the third row of the “X input” menu, where you can change all settings for monitoring the remote powering and for the alarms which are triggered when certain values drop below their alarm thresholds. The current remote feed current is displayed here initially. Pressing the “Menu Read” button will take you to the activation and deactivation of the alarms, which is set with the aid of the ← or → cursor keys. Press the “Menu Read” button again and use the ← or → cursor keys to adjust the lower alarm threshold in 50 mA increments (from 50 mA to 250 mA). The upper alarm threshold is adjusted in similar fashion after pressing the “Menu Read” button (range from 100 mA to 350 mA).

The fourth row of the “X input” menu shows the current temperature of the device.

All of the information for the “X input” menu applies analogously to the “Y input” menu.

## 5. Programming the SAT distribution field with the HE programming software

### 5.1 Inserting the SAT distribution field into a project

One or more SAT distribution fields can be inserted under “Planning → Project Data” in the HE programming software.

**Project parameters**

Place of the Head-End

Name 1: network operator  
Name 2: area  
Street: sample street  
City: 12345 sample village

Configuration of the Head-End

Number of base-units: 8  
Number of SAT IF splitter: 1  
 bus controller / bus sys  
Type of bus controller: 3  
Type of modem: ar  
Modem interface: COM 1  
Modem call number:  
Identification code:

Close

After entering the SAT distribution field it can be called up in the HE programming software under “SAT-ZF pre-distribution”.

**1. SAT-ZF-Splitter ( Bus address: 50 )**

Device configuration  
1. U3xx - bus address: 50 SAT-Inputs: 2

X-Input  
Satellite: open  
Polaris. / Band: horizontal / Low  
Attenuator: 0.0 dB  
 Equaliser  
 Monitoring of remote supply powering  
Lower alarm threshold: 0.15 A  
Higher alarm threshold: 0.10 A  
actual remote current:

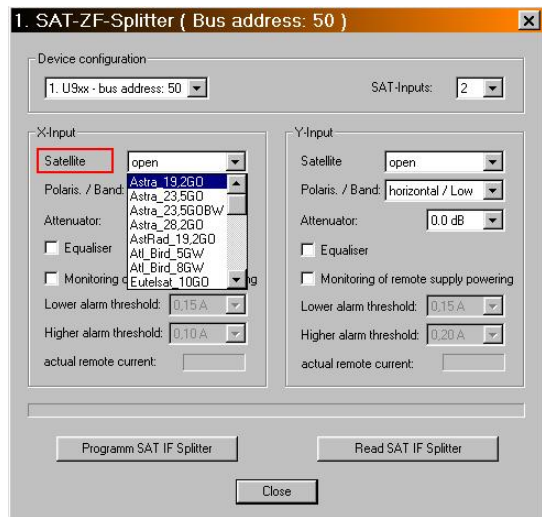
Y-Input  
Satellite: open  
Polaris. / Band: horizontal / Low  
Attenuator: 0.0 dB  
 Equaliser  
 Monitoring of remote supply powering  
Lower alarm threshold: 0.15 A  
Higher alarm threshold: 0.20 A  
actual remote current:

Programm SAT IF Splitter Read SAT IF Splitter  
Close

## 5.2

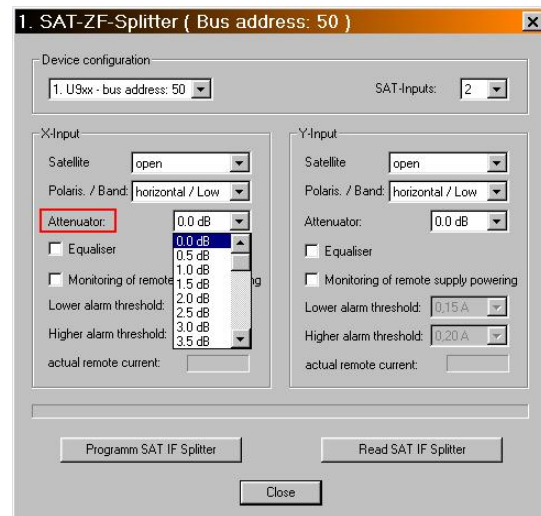
## Programming the SAT inputs

Any of the satellites stored in the database can be assigned to the SAT inputs.



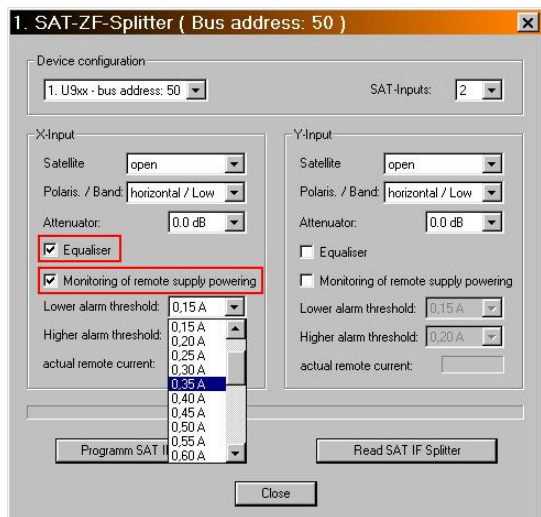
The next step is to select the polarization and the band.

The attenuation of the SAT distribution field can also be adjusted via the HE programming software. The adjustment range is 0 to 16 dB, with increments of 0.5 dB.



In addition, the 7 dB slope equalization and the monitoring of the LNC remote feed can also be activated or deactivated via the software. Values between 100 mA and 700 mA are available for the lower threshold, with values between 200 mA and 800 mA available for the upper threshold (in increments of 50 mA).





The current remote feed current is displayed after the SAT distribution field has been read out. Read it out again to update the display.

All operating information for the X-input applies analogously to the Y-input.

## 6.

### Indicator lamps

The green LED on the front panel of the device indicates that the power supply unit is operating without any faults. A green LED is also used to indicate if the LNC remote feed is activated.

If the monitoring of the LNC remote feed is activated and the current reading moves outside the previously specified window then this is signaled with a red LED.

## 7 Technical data

Type		U-911	U-912	U-913	U-914	U-915	U-916	U-921	U-922	U-923	U-924	U-925	U-926
<b>Order no.</b>		380 192	380 212	380 213	380 214	380 215	380 216	380 221	380 222	380 223	380 224	380 225	380 226
<b>Inputs / outputs</b>		2x 1 in 8			1x 1 in 16			2x 1 in 8			1x 1 in 16		
<b>No. of power supply units</b> 230V / 28VA		2	1	0	2	1	0	2	1	0	2	1	0
<b>Remote feed current</b>	[mA]	350	350	1500*	350	350	1500*	350	350	1500*	350	350	1500*
<b>LNC feed voltage</b>	[V]	16	16	15–18	16	16	15–18	16	16	15–18	16	16	15–18
<b>Inputs/outputs (F sockets)</b> <b>(SMA connectors)</b>	[ $\Omega$ ] [ $\Omega$ ]	75 / 75 —						— 50 / 50					
<b>Input frequency range</b>	[MHz]	950–2150											
<b>Nominal input level</b>	[dB $\mu$ V]	85											
<b>Transmission loss</b>	[dB]	0 $\pm$ 2											
<b>Level decoupling</b>	[dB]	> 40											
<b>Level adjuster</b> (0.5 dB increments)	[dB]	0...-15											
<b>Slope equalization</b>	[dB]	0/7 $\pm$ 1											
<b>Freq. response</b> , insertion attenuation in 36 MHz bandwidth	[dB <sub>ss</sub> ]	< 1											
in nominal frequency range	[dB <sub>ss</sub> ]	< 2											
<b>Active return loss</b> Inputs/outputs	[dB]	$\geq$ 12 / $\geq$ 14											
<b>Output decoupling</b>	[dB]	> 20											
<b>Measuring outputs</b> (1 per level) Nominal decoupling attenuation	[dB]	-10											
Active return loss	[dB]	15											

\* max. 1.5 A, depending on the feed network proportion and the internal fuses.

## 7 Technical data

Type		U-931	U-932	U-933	U-934	U-935	U-936	U-941	U-942	U-943	U-944	U-945	U-946
<b>Order no.</b>		380 231	380 232	380 233	380 234	380 235	380 236	380 241	380 242	380 243	380 244	380 245	380 246
<b>Inputs / outputs</b>		2x 1 in 8			1x 1 in 16			2x 1 in 8			1x 1 in 16		
<b>No. of power supply units</b> 230V / 28VA		2	1	0	2	1	0	2	1	0	2	1	0
<b>Remote feed current</b>	[mA]	350	350	1500*	350	350	1500*	350	350	1500*	350	350	1500*
<b>LNC feed voltage</b>	[V]	16	16	15–18	16	16	15–18	16	16	15–18	16	16	15–18
<b>Inputs / outputs</b> (F sockets) (SMA connectors)	[ $\Omega$ ] [ $\Omega$ ]	– / 75 50 / –						75 / – – / 50					
<b>Input frequency range</b>	[MHz]	950–2150											
<b>Nominal input level</b>	[dB $\mu$ V]	85											
<b>Transmission loss</b>	[dB]	0 $\pm$ 2											
<b>Level decoupling</b>	[dB]	> 40											
<b>Level adjuster</b> (0.5 dB increments)	[dB]	0...-15											
<b>Slope equalization</b>	[dB]	0/7 $\pm$ 1											
<b>Freq. response</b> , insertion attenuation 36 MHz bandwidth in nominal frequency range	[dB <sub>ss</sub> ] [dB <sub>ss</sub> ]	< 1 < 2											
<b>Active return loss</b> Inputs/outputs	[dB]	$\geq 12 / \geq 14$											
<b>Output decoupling</b>	[dB]	> 20											
<b>Measuring outputs</b> (1 per level) Nominal decoupling attenuation Active return loss	[dB] [dB]	-10 15											

\* max. 1.5 A, depending on the feed network proportion and the internal fuses.



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