

Compliance with WEEE / RoHS Directives at VIERLING

All products from VIERLING Communications GmbH that are sold in the European Union fulfill the requirements of the German Electrical and Electronic Equipment Act and thus the EU Directives 2002/96/EG on old electrical and electronic devices and 2002/95/EG on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

1. EU Directive on WEEE

1.1 National implementation in the German Electrical and Electronic Equipment Act

The EU Directive on WEEE (waste electrical and electronic equipment) has been implemented in the national law of the member countries. VIERLING's compliance with the WEEE Directive described hereafter relates exclusively to the German implementation of this directive in accordance with the Electrical and Electronic Equipment Act. Fulfillment of the EU Directive on WEEE in other EU countries is ensured by the importer.

1.2 WEEE labeling

All equipment that is commercialized by VIERLING Communications GmbH in Germany is labeled as follows:

B2B equipment:	Manufacturer indication, date of commercialization
B2C equipment:	Manufacturer indication, date of commercialization and "no waste" icon

All equipment delivered by VIERLING Communications to other countries (EU and elsewhere) is labeled as follows:

B2B equipment:	Manufacturer indication with regard to warranty claims (no reference to WEEE), date of manufacture
B2C equipment:	Manufacturer indication with regard to warranty claims (no reference to WEEE), date of manufacture and "no waste" icon

WEEE labeling of equipment commercialized in other EU countries is handled by the importer.

1.3 Registration with the Foundation Elektro-Altgeräte-Register (EAR)

In compliance with §6 Para. 2 of the Electrical and Electronic Equipment Act, VIERLING Communications GmbH registered on November 23, 2005 with the relevant national clearing house for Germany. The WEEE registration number for VIERLING Communications GmbH is DE97813185. VIERLING Communications GmbH is not registered as a manufacturer under WEEE in any other EU country.

1.4 Handling of B2B equipment under WEEE

Equipment commercialized in the B2B area is reported by VIERLING Communications GmbH to the Foundation Elektro-Altgeraete-Register (EAR). Business customers can return the equipment at no charge. The cost transfer is EXW (ex works). The equipment is processed by a certified disposal company and the cost of this service is paid by VIERLING Communications GmbH.

1.5 Handling of B2C equipment under WEEE

Equipment commercialized in the B2C area is reported by VIERLING Communications GmbH to the Foundation Elektro-Altgeraete-Register (EAR). After the usage duration is over, end users can return the equipment freight collect to VIERLING Communications GmbH. The end user is informed accordingly by a scrapping notice that is included with each piece of equipment. The equipment is processed by a certified disposal company and the cost of this service is paid by VIERLING Communications GmbH.

2. RoHS

Conversion of production to ensure compliance with RoHS (restriction of hazardous substances) is proceeding on a step-wise basis. Most products are already RoHS-compliant as of the start of 2006. Corresponding labeling will be applied to equipment that is delivered starting July 1, 2006.

2.1 RoHS labeling starting July 1, 2006

2.1.1 RoHS-compliant equipment

RoHS-compliant equipment is labeled as follows:



2.1.2 RoHS-compliant equipment manufactured with solder that contains lead

Equipment that falls under the exception "Lead in solders used for servers, storage and storage array systems as well as network infrastructure equipment for switching, signal forwarding, transmission and network management in the telecommunications sector" in accordance with Annex Number 1, Official Journal of the European Union, L280/18, October 25, 2005 is labeled as follows:



2.1.3 Spare parts

Spare parts for equipment that was commercialized prior to July 1, 2006 are not subject to the RoHS Directive and are thus not labeled with RoHS.

2.1.4 Subassemblies

Individual subassemblies are not labeled.

2.2 Solder used for test systems and ECOTEL devices

Lead-free solder has a tendency to form whiskers and exhibits an increased risk of tin pest¹. The RoHS Directive (2002/95/EG) expressly permits the use of soldering tin containing lead in applications with heightened requirements, e.g. for equipment used in military and aerospace applications and for network infrastructure elements and transmission equipment or network management systems, as was permitted in the past.

To ensure the necessary quality required in the telecommunications sector, VIERLING Communications GmbH will continue to manufacture certain device groups with solder that contains lead even after the deadline. This includes all of the products in the area of test equipment and all ECOTEL products.

¹ **Tin pest** is an allotropic transformation of the element tin, which causes deterioration of tin objects at low temperatures. Tin pest has also been called *tin disease*, or *tin leprosy* (*Lèpre d'étain*). At 13.2 degrees Celsius and below, pure tin transforms from the (silvery, ductile) allotrope of β -modification white tin to brittle, α -modification gray tin. This transformation spreads slowly starting at isolated points. In tin objects, it manifests itself in the form of dark spots followed by beads on the surface. The probability of this transformation increases at lower temperatures while the speed of the reaction decreases. The ideal transformation temperature is thus approx. $-48\text{ }^{\circ}\text{C}$. The transformation is accelerated through alloys with other metals (e.g. zinc, aluminum) or prevented (e.g. antimony, bismuth). Contact with a alcohol-based solution pink salt (platinic ammonium chloride, $(\text{NH}_4)_2[\text{SnCl}_6]$) also accelerates the transformation.