



# AI-5

# OPTICAL FIBER

# FUSION SPLICER

Suitable for security monitoring special construction

# SIGNAL FIRE INTELLIGENT MANUFACTURING

An effective balance between quality and cost-effectiveness



**8s**

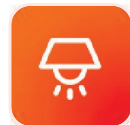
**8S SPLICING**

**18s**

**18S HEATING**



**5200mAh LITHIUM BATTERY**



**Comes with LED lighting**

Signal Fire AI-5 is mainly suitable for security monitoring and other engineering projects. Adopting a 5-inch color screen, the operation graphics are simple and intuitive; Up to 320x focusing magnification, 8 second high-speed splicing, 18 second heating, with a 50% increase in work efficiency compared to ordinary fusion machines; The 5200mAh lithium battery can fuse and heat about 160 cells when fully charged. Its unique lighting design makes it convenient for night construction or emergency repairs.



# 3 in 1 fiber holder

SM, MM, bare fiber, pigtail, Drop cable, multi fiber cable



**Jumper fiber  
(pigtail)**

**Drop cable**

**Bare fiber**



# 5200mAh lithium battery

Charging time  $\leq 3.0$  hours;

In full state, 160 cores can be continuously fused and heated

## Charging channel

The battery can be removed and charged separately



Press to popup the battery

## Charging mouth

Input voltage :13.5 $\pm$ 0.5V  
Input current :4.8A

Power  
indicator  
light

## Charge indicator light

Indicator light turns off when  
fully charged

Press to check  
the power level



# Dust prevention fall prevention shock prevention



**Thickened buffer structure**

*Don't be afraid to knock! Touch! Fall!*

# Lighting for splicer

Convenient for night operation



# Basic parameter

<b>Fiber alignment</b>	Core/cladding
<b>Motor number</b>	Four motors (accurate of fiber alignment: 0.5μm)
<b>Splicing time</b>	8s
<b>Heating mode</b>	18s, can be customized according to the external environment
<b>Fiber type</b>	Single-mode fiber (SMF/G.652), BIF/G.657); Suitable for single mode, multi-mode, bare fiber, tail fiber, drop cable, jumper, invisible fiber fusion;
<b>The cladding diameter</b>	80-150 μm
<b>Splicing loss</b>	0.02dB (SM) 、 0.01dB (MM) 0.04dB (DS/NZDS)
<b>Splicing mode</b>	Automatic focusing core alignment, conventional/high precision welding
<b>Splicing way</b>	Automatic, semi-automatic
<b>Fiber holder</b>	Three in one fixture, no need to change, suitable for single/multi-mode, multi-core cable/bare fiber, tail fiber, jumper fiber,drop cable
<b>Battery capacity</b>	5200mAh large capacity lithium battery charging time ≤3.5; It can continuously weld and heat about 160 cores
<b>Magnification</b>	320x (X or Y axis single display) , 160x (x and Y axis dual display)
<b>Fiber diameter</b>	Coating diameter: 80-150μm/Coating diameter: 100-1000μm
<b>Cutting length</b>	Coating layer 250μm below: 8-16mm/coating layer 250-1000μm: 16mm
<b>Heat shrink tube</b>	60mm、 50mm、 40mm、 25mm
<b>Tensile testing</b>	standard 2N
<b>display</b>	5 inch TFT color display screen
<b>Charge mobile device</b>	The USB port can charge mobile devices such as mobile phones
<b>Boot time</b>	1s, boot can enter the working mode
<b>Data is stored</b>	Unlimited, machine storage 1000 groups, the excess part can be stored in the server, can export data.
<b>Wireless communication</b>	Based on bluetooth 4.2 protocol standard, the working band is 2.4GHz, the maximum transmission range is 60m
<b>Software upgrade</b>	Mobile phone APP Internet update, enable Bluetooth synchronization upgrade machine software
<b>Management function</b>	The equipment owner can be bound as the highest authority, and can remotely view the welding records, welding time, loss, etc. through the mobile phone APP. The number of welding times or working time of the equipment can be set. The manager can effectively manage a single or multiple equipment.
<b>interface</b>	USB2.0 (Type A) can be used to connect external LED lights and charge mobile devices
<b>Return loss</b>	Better than 60 db
<b>Product protection</b>	Waterproof, dustproof and fall proof
<b>Power supply</b>	Input AC100-240V 50/60Hz, output DC13.5V/4.8A, the current power mode can be identified, real-time monitoring of the current battery level
<b>The work environment</b>	Temperature: -15 ~ +50℃, humidity: < 95%RH (no condensation), working altitude: 0 ~ 5000m, maximum wind speed: ≤15m/s



# RANDOM CONFIGURATION



- ① Toolkit      ② Main engine      ③ S07 Fiber Cleaver      ④ Alcohol  
Bottle      ⑤ Wire stripping pliers      ⑥ Miller stripper      ⑦ Belt  
⑧ Toolbox strap      ⑨ Power Adapter      ⑩ Fiber for ARC  
calibration/User's manual/Quality Certificate/Warranty Card

# Size and wight



## Machine weight

2.05kg (with battery)

1.68kg (without battery)

## Toolkit weight

3.50kg (including machine and accessories)



## Total weight

4.05kg

# SERVICE COMMITMENT

Three years warranty, but these circumstances are not within the scope of this provision.

01.Except for the cleaver, miller clamp, stripping pliers, fiber holders and other tools whose life depends on the frequency of use and the use of the environment. Also electrodes are consumption material which are not in the warranty.

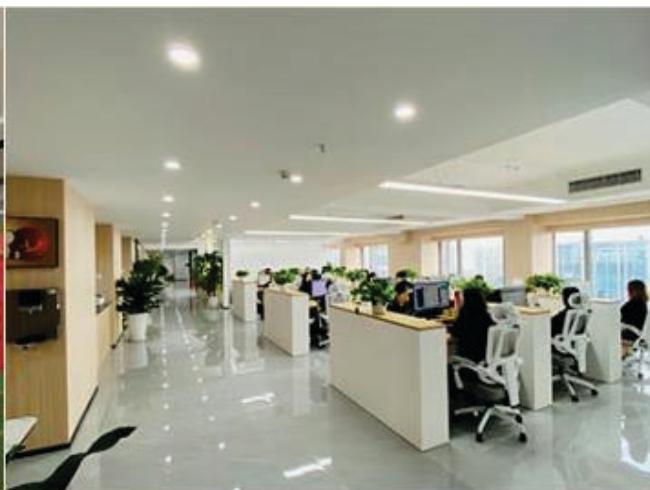
02.Battery and power adapter are warranty for one year, it is in free warranty where it is damaged or can not be charged in one year.



Signal Fire Technology Co., Ltd. is a high-tech joint-stock enterprise specializing in the research and development, production, and sales of communication equipment, with a registered capital of 10 million. It is a national high-tech enterprise. Our main products include fiber optic fusion splicers, electric fiber cleaver, OTDR (Optical Time Domain Reflectometer), and 9-in-1 optical fiber stripper. They are widely used in the construction, maintenance, emergency repair, security monitoring, and research and teaching of optical cable lines in telecommunications, mobile, China Unicom, radio and television operators, post and telecommunications, railway, engineering companies, and public institutions.



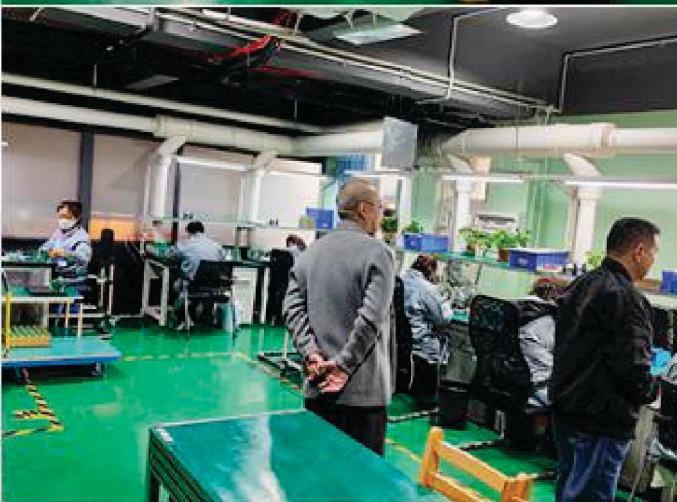




The factory is located in Chengdu High tech International Enterprise Port, with a modern production factory and standardized office buildings. We have passed the ISO9001 international quality management system certification, and our products have passed the EU CE, ROHS. International certifications such as FCC in the United States and UKCA in the United Kingdom have been passed by the National Institute of Quality Supervision and Inspection, China Academy of Information and Communications Technology.











The qualified testing of Taier Laboratory has obtained nearly a hundred domestic and international patents at the same time. The "Signal Fire" series products have been sold to over 100 countries and regions including North America, South America, Europe, Africa, and Asia, and have received unanimous praise from customers.





# Operator winning bid brand



Telecom installation and maintenance skills competition, Signal fire fusion splicer excellent performance, won the group first prize





# Exhibition photos





# Intellectual Property Inspection and Certification

Signal Fire Technology Co., Ltd. has passed the ISO9001 international quality management system certification. The product has passed international certifications such as the CE, RoHS, the United States FCC, and UKCA in the United Kingdom, and passed the qualified test through National Quality Supervision Institute, China Xintong Institute, and Tel Laboratory. At the same time, we obtained nearly 100 patents.

**CERTIFICATE**

**Anbotek**  
Product Safety

**CERTIFICATE**  
Of Conformity  
Directive 2014/53/EU  
On The Radio Equipment Directive

Certificate No.: AT18220WC202819  
Certificate Holder: SIGNAL FIRE TECHNOLOGY CO., LTD.  
Address: Building 18, Chengdu Hi-Tech International Enterprise Park, Liao U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
Manufacturer: SIGNAL FIRE TECHNOLOGY CO., LTD.  
Address: Building 18, Chengdu Hi-Tech International Enterprise Park, Liao U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
Product Name: OPTICAL FIBER FUSION SPLICER  
Model No.: AI-9, AI-6C, AI-6V, AI-7C, AI-8C, AI-8X, AI-7V, AI-X, S9  
Trade Mark: Signal fire  
Rating: Input: 13.5V/4.8A DC (with DC 11V, 7800mAh Battery inside)

The radio equipment meets the following essential requirements	Complied	
Article 3(1)(a) ■ Safety	EN IEC 62368-1:2020+A11:2020	Yes
Article 3(1)(a) ■ Health	EN 50663:2017, EN 62479:2010	Yes
Article 3(1)(b) ■ EMC	ETSI EN 301 488-1 V2.3.2 (2019-11) ETSI EN 301 488-17 V3.2.4 (2020-09)	Yes
Article 3(2) ■ Radio	ETSI EN 300 328 V2.2.2 (2019-07)	Yes

Note: The attached Annex forms part of this certificate which consists of 2 pages.

Jan. 03, 2023  
Date

**CE** The CE Marking may only be used if all relevant and effective EU Directives are complied with **CE**

Shenzhen Anbotek Compliance Laboratory Limited  
1/F, Building D, Sogood Science and Technology Park, Samui community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China 518128  
Tel: (86)755-26066440 Fax: (86)755-26014772  
Http://www.anbotek.com Email: service@anbotek.com

**CERTIFICATE**

**Anbotek**  
Product Safety

**CERTIFICATE**  
Of Conformity  
Radio Equipment Regulations 2017  
(SI 2017 No. 1206)

Certificate No.: AT18220WC202820  
Certificate Holder: SIGNAL FIRE TECHNOLOGY CO., LTD.  
Address: Building 18, Chengdu Hi-Tech International Enterprise Park, Liao U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
Manufacturer: SIGNAL FIRE TECHNOLOGY CO., LTD.  
Address: Building 18, Chengdu Hi-Tech International Enterprise Park, Liao U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu China  
Product Name: OPTICAL FIBER FUSION SPLICER  
Model No.: AI-9, AI-6C, AI-6V, AI-7C, AI-8C, AI-8X, AI-7V, AI-X, S9  
Trade Mark: Signal fire  
Rating: Input: 13.5V/4.8A DC (with DC 11V, 7800mAh Battery inside)

The radio equipment meets the following essential requirements	Complied	
CHAPTER 1 (General)(1)(a) ■ Safety	BS EN IEC 62368-1:2020+A11:2020	Yes
CHAPTER 1 (General)(1)(a) ■ Health	BS EN 50663:2017, BS EN 62479:2010	Yes
CHAPTER 1 (General)(1)(b) ■ EMC	ETSI EN 301 488-1 V2.3.2 (2019-11) ETSI EN 301 488-17 V3.2.4 (2020-09)	Yes
CHAPTER 1 (General)(2) ■ Radio	ETSI EN 300 328 V2.2.2 (2019-07)	Yes

Note: The attached Annex forms part of this certificate which consists of 2 pages.

Jan. 03, 2023  
Date

**UK CA** The UKCA Marking may only be used if all relevant and effective UK Regulations are complied with **UK CA**

Shenzhen Anbotek Compliance Laboratory Limited  
1/F, Building D, Sogood Science and Technology Park, Samui community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China 518128  
Tel: (86)755-26066440 Fax: (86)755-26014772  
Http://www.anbotek.com Email: service@anbotek.com

**TCB**

**TCB**

**GRANT OF EQUIPMENT AUTHORIZATION**  
Certification  
Issued Under the Authority of the  
Federal Communications Commission  
By:

LGA1 Technological Center S.A. (APPLUS)  
Ronda de la Font del Carme, s/n <BR>P.O. Box 08193,  
Barcelona,  
Spain

Date of Grant: 01/17/2024  
Application Dated: 01/17/2024

Signal Fire Technology Co., Ltd.  
No.8-6 Qingyang Zone, Jiaolong Industrial Park  
Qingyang District, Chengdu, China  
Chengdu,  
China

Attention: Jason Yang

**NOT TRANSFERABLE**  
EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: 2AB98-AI-10A  
Name of Grantee: Signal Fire Technology Co., Ltd.  
Equipment Class: Digital Transmission System  
Notes: OPTICAL FIBER FUSION SPLICER

Grant Notes	FCC Rule Parts	Frequency Range (MHz)	Output Watts	Frequency Tolerance	Emission Designator
	15C	2402.0 - 2480.0	0.06193		

Output power listed is conducted. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons. End-users must be provided with operating procedures for satisfying RF exposure compliance.

**EACC**  
Eurasian Conformity Assessment Center

**QUALITY MANAGEMENT SYSTEM CERTIFICATE**

Certificate No.: 11423Q45347R2M

This is to certify that the Quality Management System of

**SIGNAL FIRE TECHNOLOGY CO., LTD.**

Unified Social Credit Code: 91510100072411028D

Registered Address: No.1111 Changsheng Bridge, Hongqiang Town, Small and Micro Enterprise Innovation Park, North Area of Chengdu Modern Industrial Port, Pidu District, Chengdu

Production Office Address: Building 18, Chengdu High-tech International Enterprise Park, Liao U Valley, No.1111 Changsheng Bridge Road, Pidu District, Chengdu City, Sichuan Province, China

Has been audited to conform to the following Quality Management System standard

**GB/T19001-2016/ISO9001:2015**

The Applicable Scope

The production of optical fiber fusion splicer

Date of initial issuance: Aug. 22, 2017  
Date of issuance: Jul. 11, 2023  
Date of expiry: Jul. 30, 2026

Issued by: *Wei Fargue* Beijing East Allreach Certification Center Co., Ltd.

**EACC** **IAF** **CNAS**

The certificate will remain valid only if the certified organization accepts surveillance audits at regular intervals and is audited to be qualified. The information of this certificate is available at EACC website (www.eacc.com.cn) and CNAS website (www.cnas.com.cn), and it is also available by scanning the QR Code on the front right side.

Address: 1st Floor, No. 121 Building, No. 12, Jingyuan Street, Jingyuan Science & Technology Industrial Base, Jingyuan Park of Jingyuan Science & Technology Zone, Tangshan District, Beijing 101102

United States of America  
United States Patent and Trademark Office



Reg. No. 7,197,549  
Registered Oct. 17, 2023  
Int. Cl.: 7

Trademark  
Principal Register

Signal Fire Technology Co., Ltd. (CHINA limited company (Ltd.))  
No.1111, Changsheng Bridge, Hongguang Town  
Small and Micro Enterprise Innovation  
Park, Pidu Dist., Chengdu, CHINA 611730

CLASS 7: Cutting machines; Electric arc cutting apparatus; Electric arc welding apparatus; Electric scissors; Electric shearing machines; Electric welding machines; Electrodes for welding machines; Gear cutting and finishing machines; Knives, electric; Soldering apparatus, electric

FIRST USE 6-15-2014; IN COMMERCE 6-15-2014

The mark consists of the stylized wording "Signal fire" with a rainbow bridge above the stylized letters "ignal fi".

SER. NO. 97-339,851, FILED 03-31-2022



Katherine Kelly Vidal  
Director of the United States  
Patent and Trademark Office



United States of America  
United States Patent and Trademark Office



Reg. No. 7,197,550  
Registered Oct. 17, 2023  
Int. Cl.: 8

Trademark  
Principal Register

Signal Fire Technology Co., Ltd. (CHINA limited company (Ltd.))  
No.1111, Changsheng Bridge, Hongguang Town  
Small and Micro Enterprise Innovation  
Park, Pidu Dist., Chengdu, CHINA 611730

CLASS 8: Nippers; Pliers; Scissors; Blades for manually-operated tools; Hand-operated cutting tools; Hand-operated shears; Hand tools, namely, graving tools; Hand tools, namely, scrapers; Hand tools, namely, wire strippers; Multi-tool knives

FIRST USE 6-15-2014; IN COMMERCE 6-15-2014

The mark consists of the stylized wording "Signal fire" with a rainbow bridge above the stylized letters "ignal fi".

SER. NO. 97-339,852, FILED 03-31-2022



Katherine Kelly Vidal  
Director of the United States  
Patent and Trademark Office



CERTIFICATE OF REGISTRATION  
TRADE MARK

Trade mark number: 2341304

The Registrar of Trade Marks has registered the trade mark represented on this certificate on 23 October 2023 and certifies that the following particulars have been entered in the Register of Trade Marks.

Name and address of owner(s):

Signal Fire Technology Co., Ltd. of No.1111, Changsheng Bridge, Hongguang Town, Small and Micro Enterprise Innovation Park, Pidu Dist., Chengdu, Sichuan, 611730 China

The trade mark is registered in the following class(es):

7

Date of filing: 13 March 2023

Registered from: 13 March 2023

Registration expires on\*: 13 March 2033

Representation:



Goods and/or services, and other information relating to the registration of this trade mark are listed on the following pages.



Dated this 23<sup>rd</sup> day of October 2023  
Registrar of Trade Marks

TRADE MARKS ACT 1995

The Australian Trade Marks Register is the official record and should be referred to for the full details pertaining to this IP Right

РОССИЙСКАЯ ФЕДЕРАЦИЯ



СВИДЕТЕЛЬСТВО

на товарный знак (знак обслуживания)

№ 991737



Правообладатель: *Сигнал Файер Текнолоджи Ко. Лтд., №1111, Чаншенг Бридж, Хонгуанг Таун, Смол энд Микро Интерпрайз Инновейшн Парк, Пиду Дистрикт, Чэнду, Сычуань, Китай (СН)*

Заявка № 2023720455

Приоритет товарного знака 16 марта 2023 г.

Зарегистрировано в Государственном реестре

товарных знаков и знаков обслуживания

Российской Федерации 11 января 2024 г.

Срок действия регистрации истекает 16 марта 2033 г.

Руководитель Федеральной службы  
по интеллектуальной собственности

Ю.С. Зубов



## EINHEITSPATENT | UNITARY PATENT BREVET UNITAIRE

Hiermit wird bescheinigt, dass die einheitliche Wirkung für das nachstehende europäische Patent im Register für den einheitlichen Patentschutz eingetragen wurde.

It is hereby certified that unitary effect has been registered in the Register for unitary patent protection for the European patent indicated below.

Il est certifié que l'effet unitaire a été inscrit au Registre de la protection unitaire conférée par un brevet pour le brevet européen ci-dessous.

Europäisches Patent Nr.  
European patent No.  
Brevet européen n°

**EP4024101**

Territorialer Geltungsbereich  
Territorial scope  
Champ d'application territorial

**AT BE BG DE DK EE FI FR IT LT LU LV MT  
NL PT RO SE SI**

Tag der Eintragung  
Date of registration  
Date d'inscription

**03.09.2024**

Tag des Eintritts der Wirkung  
Date of effect  
Date de prise d'effet

**14.08.2024**

Patentinhaber | Proprietor(s) of the patent | Titulaire(s) du brevet

**Signal Fire Technology Co.,  
Ltd.**

No.8-6 Qingyang Zone  
Jiaolong Industrial Park  
Qingyang District  
Chengdu, Sichuan 610015  
CN

**António Campinos**

Präsident des Europäischen Patentamts | President of the European Patent Office | Président de l'Office européen des brevets  
München, den | Munich, | Munich, le **03.09.2024**

**URKUNDE | CERTIFICATE | CERTIFICAT**



EP4024101 750A 02/24

Christian Archambeau

The Executive Director / Der  
Exekutivdirektor

www.eipo.europa.eu

Das Europäische Patentamt hat für das einheitliche  
europäische Patent, das durch die vorliegende  
Bescheinigung bestätigt wird, die Einheitlichkeit  
ausgewiesen. Die entsprechenden Einträge sind in das  
Register für Gemeinschaftspatentschutz  
eingetragen worden.

This Certificate of Registration is hereby issued for the  
Registered Community Design identified below. The  
corresponding entries have been recorded in the  
Register of Community Designs.

AMT DER EUROPÄISCHEN UNION FÜR  
GEISTIGES EIGENTUM  
EINTRAUGUNGSRUNDE



Registered / Eingetragen 17/03/2023  
No 015014933-0001



European Patent Office  
80290 MÜNCHEN  
GERMANY

Questions about this communication?  
Contact Customer Services at [www.epo.org/contact](mailto:www.epo.org/contact)



Lerner, Christoph  
Nove Haus - Design Offices  
Luise-Ullrich-Straße 14  
80636 München  
ALLEMAGNE

Date **03.09.2024**

Reference  
**P9499EUEP**

Application No./Patent No.  
**19945932.2 / 4024101**

Proprietor  
**Signal Fire Technology Co., Ltd.**

**European patent with unitary effect**

**Communication of the date of registration of unitary effect pursuant to Rule 7(1) UPR**

The request for unitary effect received at the EPO on 21.08.24 meets the requirements of Rules 5(2) and 6 UPR.

The unitary effect of European patent No. EP4024101 was registered in the Register for unitary patent protection on 03.09.24.

### Date of effect

Under Article 4(1) Regulation (EU) No 1257/2012, the European patent with unitary effect takes effect in the participating Member States on the date of publication of the mention of the grant of the above European patent in the European Patent Bulletin, i.e. on 14.08.24.

### Territorial scope

Pursuant to Article 18(2) Regulation (EU) No 1257/2012, by way of derogation from Articles 3(1), 3(2) and 4(1), a European patent for which unitary effect is registered has exclusive jurisdiction only in those participating Member States in which the Unified Patent Court has exclusive jurisdiction with regard to European patents with unitary effect at the date of registration. For the above European patent with unitary effect, the participating Member States at the date of registration are:

**AT BE BG DE DK EE FI FR IT LT LU LV MT NL PT RO SE SI**

For proprietor(s):

**Signal Fire Technology Co., Ltd.  
No.8-6 Qingyang Zone  
Jiaolong Industrial Park  
Qingyang District  
Chengdu, Sichuan 610015  
CN**

Represented by:

**Lerner, Christoph  
Nove Haus - Design Offices  
Luise-Ullrich-Straße 14  
80636 München  
DE**

The registration will be published in the European Patent Bulletin under Section IV.2(1).

Registered Letter  
CPO Form 7030-01.22

Date

Application No./Patent No. 19945932.2 / 4024101

### For the Unitary Patent Protection Division



### NOTES RELATING TO THE REGISTRATION OF UNITARY EFFECT

#### 1. Unitary Patent Guide

This guide – available on the EPO website – provides useful information on European patents with unitary effect.

#### 2. Payment of renewal fees for European patents with unitary effect

**2.1** Under **Rule 13(1) to (3) UPR**, renewal fees for European patents with unitary effect and additional fees for their late payment are to be paid to the EPO. Those fees are due in respect of the years following the year in which the mention of the grant of the European patent which benefits from unitary effect is published in the European Patent Bulletin.

**2.2** Under **Rule 13(4) UPR**, a renewal fee in respect of a European patent with unitary effect falling due within three months of the notification of the communication referred to in Rule 7(1) UPR may still be paid within that period of three months without an additional fee.

**2.3** Moreover under **Rule 13(5) UPR**, a renewal fee for a European patent with unitary effect which would have fallen due under Rule 13(2) UPR in the period starting on the date of publication of the mention of the grant of the European patent in the European Patent Bulletin up to and including the date of the notification of the communication referred to in Rule 7(1) UPR is due on that latter date. This fee may still be paid within three months of that latter date without the additional fee referred to in Rule 13(3) UPR.

For further details you are recommended to consult the above-mentioned Unitary Patent Guide.

#### 3. Effect of revocation or limitation of the European patent

Under Article 3(3) Regulation (EU) No 1257/2012, the unitary effect of a European patent is deemed not to have arisen to the extent that the European patent has been revoked or limited.