

## Transmission Licence Application Information for the Blighter B202 Mk 2 Radar

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## 1 Introduction

Plextek's Blighter B202 Radar has CE(!) approval and FCC certification to allow it to be sold into the European and American continents respectively. In most countries it is necessary for the operator of the equipment to acquire a Transmission Licence from the national spectrum management authority. In the UK this is OFCOM and in the USA, the FCC.

Each licensing authority asks for specific characteristics of the transmitting equipment. This document provides the majority of information required by most authorities.

**Please note that this information must not be freely distributed. It may only be supplied to the relevant licensing authority and wherever possible, the licensing authority should also be asked to restrict the distribution of the information.**

## 2 Licence Application Information

Model Number		Blighter B202 Mk 2
Manufacturer		Plextek Ltd. London Road, Great Chesterford, Essex, CB10 1NY United Kingdom Tel. +44 1799 533200 Email: <a href="mailto:blighter@plextek.co.uk">blighter@plextek.co.uk</a> Web: <a href="http://www.plextek.com">www.plextek.com</a> or <a href="http://www.blighter.com">www.blighter.com</a>
International Emission Designator Code	UK/USA	26M0Q3N
Special case 2km mode emission designator	UK/USA	30M3Q3N
FCC Certification	FCC IDENTIFIER	UFQ-BLIGHTER-202
	Name of Grantee	Plextek Ltd
	Equipment Class	Licensed Non-Broadcast Station Transmitter
Frequency of operation	UK	15.7GHz to 17.2GHz
	USA (Wide Band Version)	15.7GHz to 17.2GHz
	USA (Narrow Band Version)	16.2GHz to 17.2GHz
Instrumented range of operation		10 metres to 8000 metres
Antenna Gain		+20dBi min, +24dBi max.
Antenna Azimuth Beamwidth	Wide Band Version	7.0° ±2.5° over approx. 90° electronic-scan segment
	Narrow Band Version	7.0° ±2.5° over approx. 80° electronic-scan segment
Antenna Elevation Beamwidth		±10° nominally about boresight (0°)
Polarization		Linear Horizontal
Peak Transmitter Power supplied to the Antenna		+1dBW (1.26 Watts)
Theoretical Peak Radiated Power (EIRP)		+25dBW (316 Watts)
Theoretical Mean Radiated Power (EIRP)		+24.2dBW (263 Watts)
Peak Effective Radiated Power (ERP) (For FCC)		+22.9dBW (191 Watts)
Mean Effective Radiated Power (ERP) (For FCC)		+22.1dBW (162 Watts)

## 3 Derivations

### 3.1 Power

Theoretical Peak Radiated Power (EIRP) = Peak Power (+1dBW) + Maximum Antenna gain (+24dBi)

Theoretical Mean Radiated Power (EIRP) = (Peak Power (+1dBW) + Maximum Antenna gain (+24dBi)) + Duty Cycle ( $10\log_{10}(84\%)$ )

0dBW ERP = +2.14dBW EIRP (ERP radiated power relative to a dipole antenna)

Therefore ERP (dBW) = EIRP (dBW) -2.14dB

Mean Effective Radiated Power (ERP) = Peak Power (+1dBW) + Maximum Antenna gain (+24dBi) + Duty Cycle ( $10\log_{10}(84\%)$ ) - 2.14dB

### 3.2 Emission Designator

26M0Q3N where;

First four digits define the necessary bandwidth:

$$26.0\text{MHz} = 26\text{M}0$$

Last three digits define emission class:

Q - In which the carrier is angle modulated (FM) during the period of the pulse

3 - A single channel containing analogue information

N - No information is transmitted

## 4 Support and Contact Information

For further information or technical support please contact:



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