



**Cove
Communications**

User Guide

Talk Set

Bi-directional Single Fibre Optic Audio Talk Set

Serial Number

Date Commissioned

Commissioned By

Cove Communications
Contacts.....

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1. INTRODUCTION

The **Talk Set Fibre Optic Transceiver** has been designed as a long range audio test and communication set primarily for use when testing fibre optic cable and site equipment. This product enables quality audio communication over multimode optical fibre for distances up to 4km. Longer distance operation is possible but at the expense of increasing noise due to the dispersion of the signal on the fibre.

The product is intended for use with multimode fibre and is available to order fitted with ST fibre optic connectors plus a full range of connector adaptors.

The units are fitted with a mic./earphone headset connected via a 3.5mm stereo jack socket. A constantly lit LED indicator shows low battery condition. The LED also flashes on transition to and from low power mode. The units also have an earphone volume control for individual sound level adjustment but this normally needs to be adjusted only once as the automatic gain control keeps the sound at a comfortable level despite changes in fibre length or background noise. The units incorporate voice activation battery saving circuitry, which allows the units to function for over a week on full use on a single PP3 battery. The equipment is designed to meet the European CE requirements.

2. FEATURES

- Up to 4km Multimode operating distance.
- Full bi-directional speech over a single fibre.
- Dual automatic volume control.
- Voice activated low current consumption circuitry.
- Low distortion.
- Low cost.
- Designed to meet EMC regulations.
- High efficiency fibre optic transceiver.
- Personnel output level adjustment.
- Audio input and output are short circuit proof.
- 3.5mm stereo jack socket audio input and output connector.
- Totally immune to external interference.
- Telecommunications frequency response.

3. SPECIFICATION

Audio output level:	300mW nominal
Output impedance:	< 8 Ohms
Output connector:	3.5mm stereo jack socket
Output level:	Adjustable with AGC level control to 2.5v rms (dependant on optical power received)
Optical input power range:	1 μ W - 174 μ W
Power requirements:	9v (PP3 battery) approx . 15mA (active), 1.5mA (sleep mode) <i>one week normal use/ battery</i>
LED Indications:	Power/low battery
Light detector:	Pin Diode
Wave length:	850nm, 1310nm
Optical Connectors:	ST (with adaptors for other connections)
Construction:	Hand held unit with belt clip
Overall Size:	28 x 68 x 112mm
Overall weight:	0.2kg
Operating Temperature:	-0° C to +40° C
Storage Temperature:	-20°C to +70°C
Humidity:	90% non-condensing

Link Specification

Operating distance:	Up to 4km with 50/125 or 62.5/125 fibre
Infra red spectrum :	850nm and 1310nm
Frequency response:	300Hz to 3KHz \pm 3dB
Total harmonic distortion:	Less than 3%

Cove Communications reserves the right to change the specification without notice.

4. OPERATION

4.1 General

The Cove Communications **Talk Set** is intended for communicating over and the testing of fibre optic cable.

4.2 Controls

On the **Talk Set** units there are single volume controls which adjust the audio level to the earphones. The audio input is also through the 3.5mm stereo socket. This accepts the electret microphone provided.

5. USE

THIS EQUIPMENT IS NOT WATER PROOF AND MUST NOT BE USED OUTDOORS UNLESS PROTECTED BY A WATERPROOF COVERING .

5.1 External Use

If this fibre optic audio **Talk Set** is to be used in damp conditions, ensure the unit is fitted with a waterproof covering.

5.2 Power Requirement

1x 9 volt (PP3) per unit.

5.3 Power Connections and LED Indications

A yellow LED is provided on the unit, which indicates when the battery is low during use.

5.4 Audio Connector

The audio connector is a standard 3.5 stereo jack socket.

5.5 Fibre Optic Connection

The units are supplied with ST fibre optic converters together with couplers for connection to other types.

5.6 Fibre Optic Cable

The receiver will work with all multimode fibre optic cable. 50/125 and 62.5/125 fibre optic cable are recommended.

6. MAINTENANCE

The unit have been designed for continuous running and fault free operation. Should the unit require servicing it must be returned to Cove Communications, as there are no internal customer serviceable parts.

7. FAULT DIAGNOSIS

Yellow power LED 'on continuously':

Battery is low.

Audio level is low:

No audio input or 'Audio Level' is set too low.

High noise level on the audio signal:
(*Background noise*)

Dirt in fibre optic connectors or fibre optic cable is too long.

8. CONTENTS

1 x Outer case containing:

- 2 x Duplex **Talk Set**
- 2 x Earphone/Mic. headsets
- 6 x ST - ST patch leads
- 2 x 9 volt (PP3) batteries
- 2 x ST - FC adapters (M-M)

-END-

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