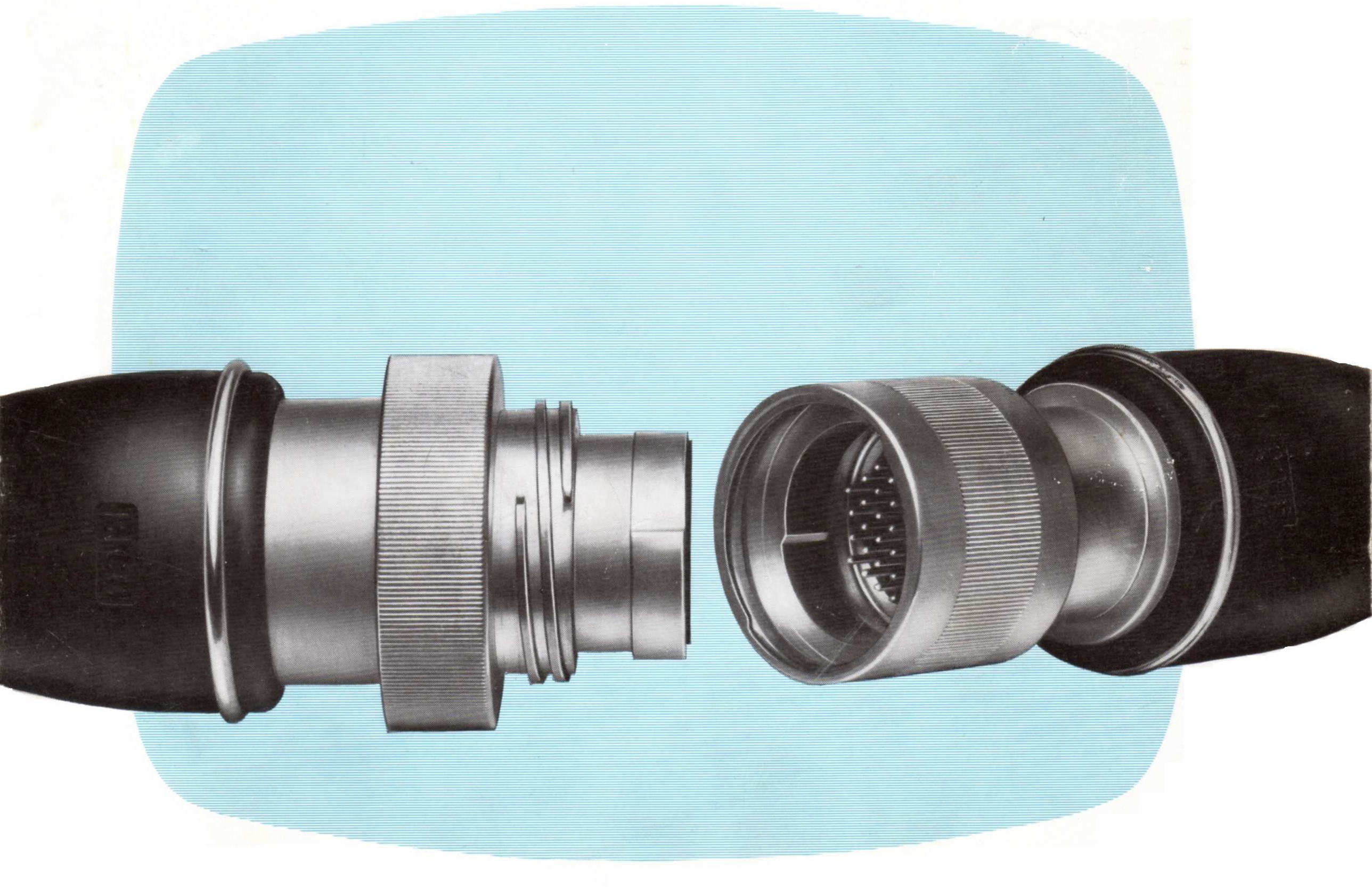
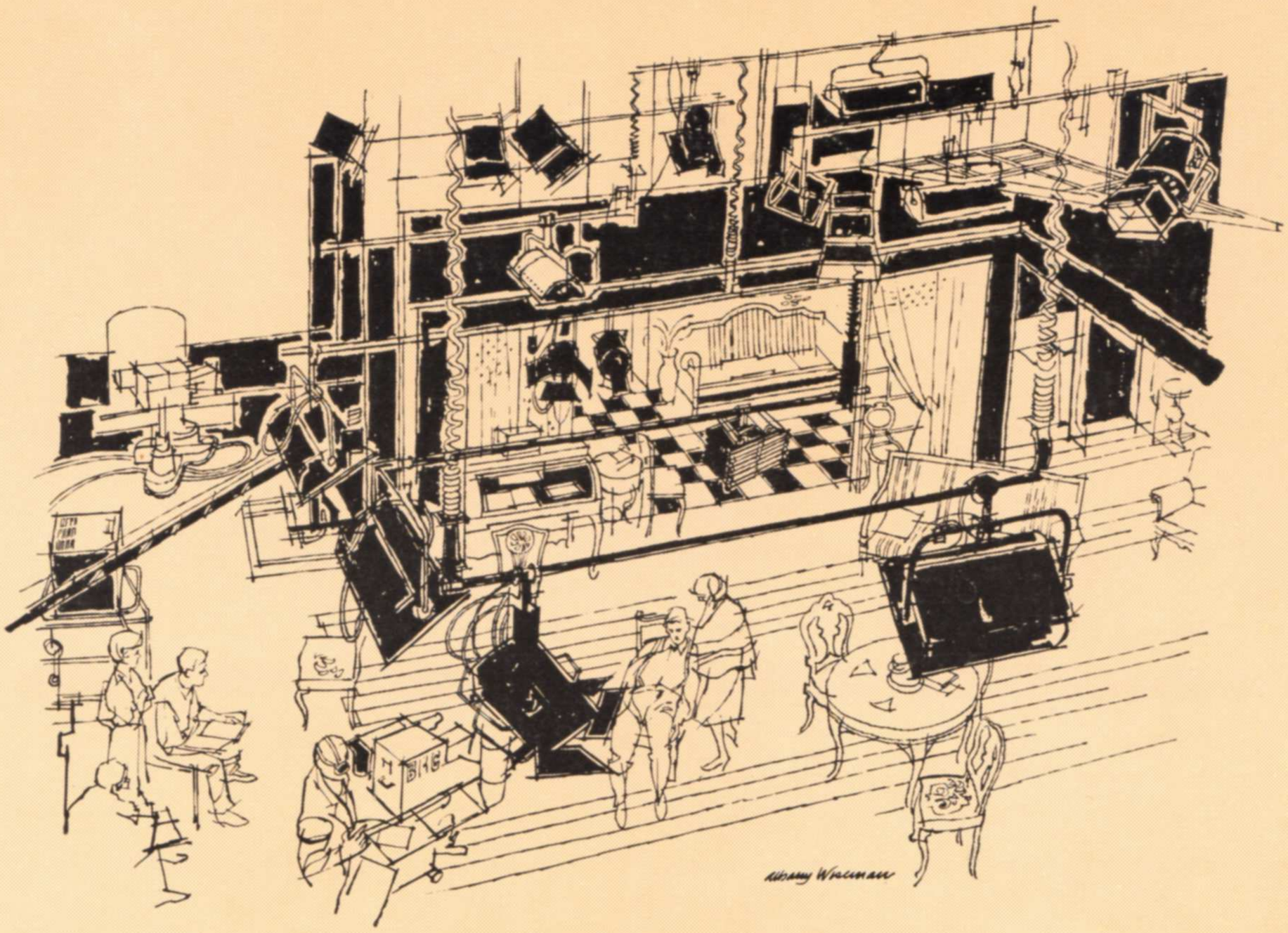
BICC

Publication No. **477**
FEBRUARY 1964

TELEVISION CAMERA CABLES AND COUPLERS





Television Camera Cables

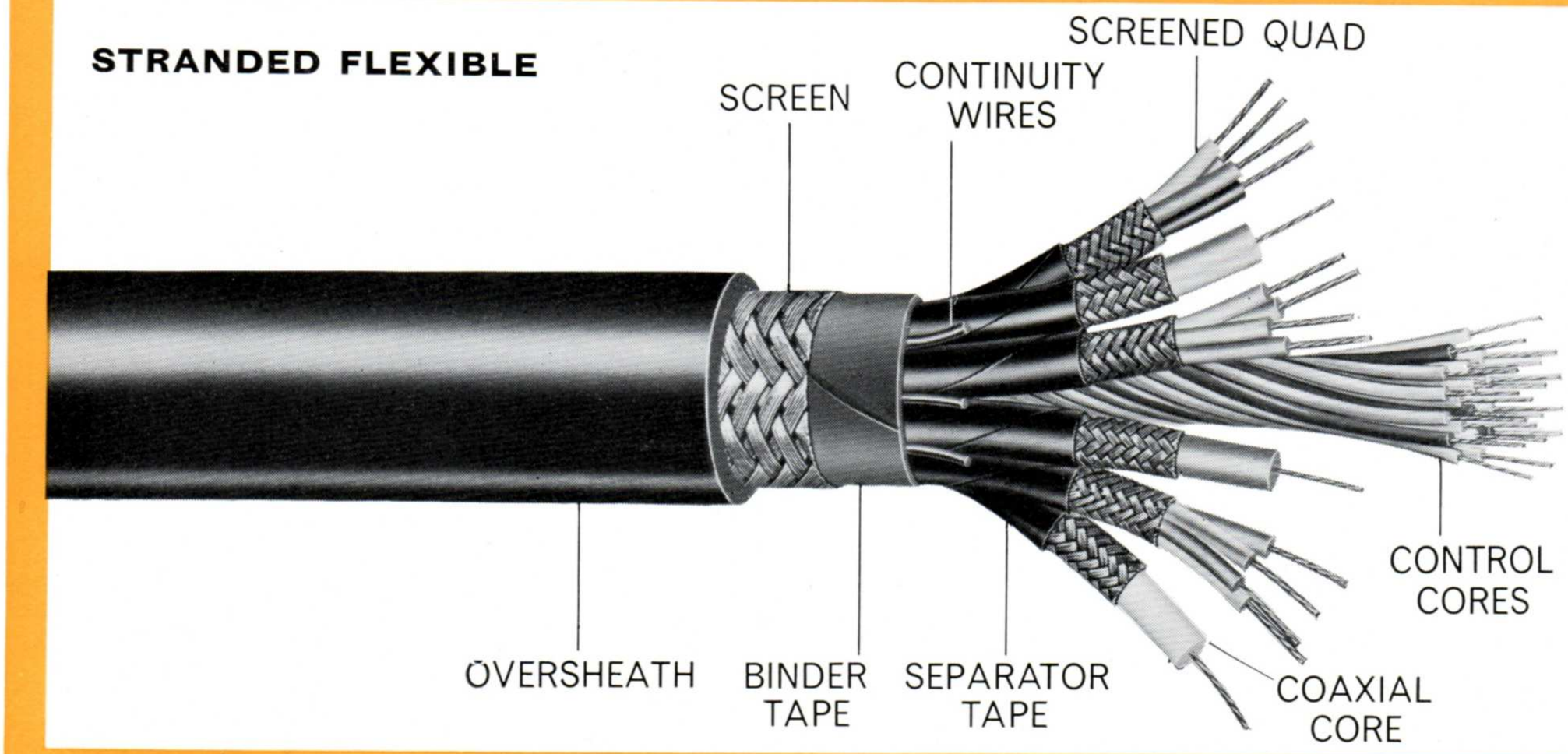
BICC manufacture camera cables which are used with the World's leading television cameras.

Besides the tradition of quality maintained by all BICC cables, BICC television camera cables embody the latest technical improvements which result from the continuous design and manufacture of radio frequency and other cables. The optimum requirements of mechanical reliability, ease of handling and efficient electrical performance are built into each one, and the high standards of BICC quality, backed by rigid control over materials and production at every stage, ensure reliable transmission characteristics.

BICC couplers, of advanced design and protected by World patents, can be obtained in both moulded or demountable versions. Mating units for mounting on panels are also available.

Cables and couplers are supplied for use with black and white or colour television cameras for studio, outdoor, closed circuit or radio link applications. Manufacture of cables to special designs may be undertaken provided commercial quantities are involved.

The assistance of BICC engineers is available freely on request concerning the choice and application of any type of cable.

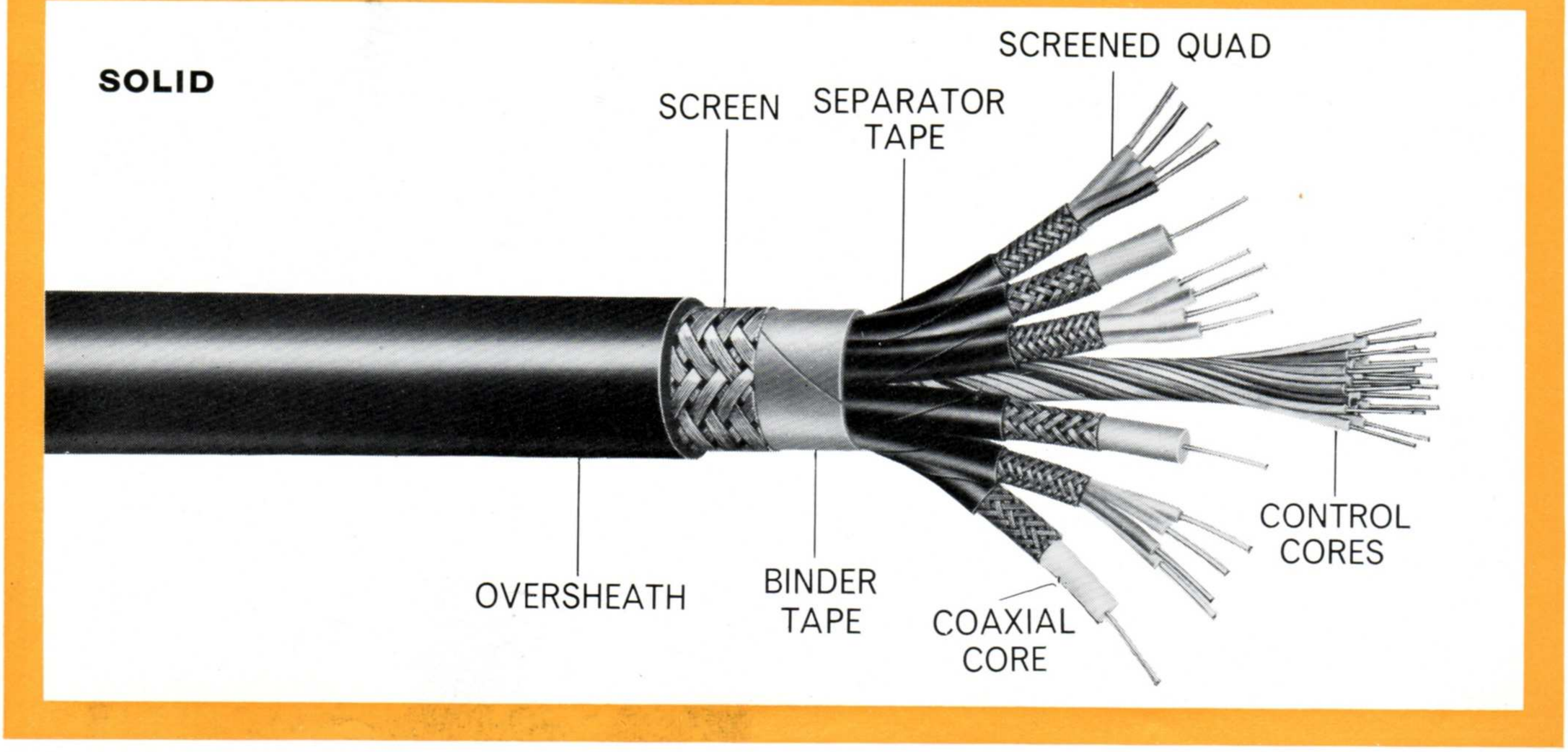


Cables

For use with cameras for black and white television, a basic design of cable having thirty-three cores has proved most popular. Two varieties are available, one with solid conductors, the other having stranded conductors. Three coaxial cores, three screened quads and eighteen control cores make up the circuits, and a choice of finish or oversheath on both types of cables enables them to be used on widely different locations.

The stranded conductor cable is larger in size and more robust and is suitable for outdoor extension leads and radio links. In this design six enamelled conductors are included which can be bonded to the screen to lower the resistance, thus permitting longer lengths of cable to be coupled together. This construction, with the correct choice of oversheath, provides a cable for arduous duties yet is flexible and easy to coil and manipulate.

The cable with solid conductors is more suited for indoor studio work, closed circuit and fixed installations. It is small in size and thus is easier to handle; the range of finishes providing a choice suitable for any situation.



Basic Construction

CORES

Each coaxial core is insulated with solid polyethylene and screened with annealed copper wire braid. They are manufactured to the same high standards as BICC radio frequency cables.

The cores of the three quads are insulated with polyethylene and each quad is individually screened with annealed copper wires and then taped. This tape is not intended to provide insulation sufficient to allow the screens to be used as extra circuits, but is only to reduce the possibility of chance contacts with the screens of other units.

The eighteen single control cores are insulated with polypropylene, which provides good insulation and is tougher than polyethylene.

All cores are distinguished by colour for circuit identification; coaxial units and quad cores by self-colour, control cores by colour bands.

Special methods of construction are used to provide a high degree of flexibility and resistance to damage, together with good electrical performance.

SCREEN

The cables are collectively screened with an annealed copper wire braid—the stranded conductor type incorporating six enamelled wires under the braid to provide additional conductivity to the screen when required.

Oversheaths

P.V.C. OVERSHEATHS

P.V.C. (polyvinyl chloride) oversheaths are applied over the screen and are of high quality compound suitable for world-wide use.

P.C.P. OVERSHEATHS

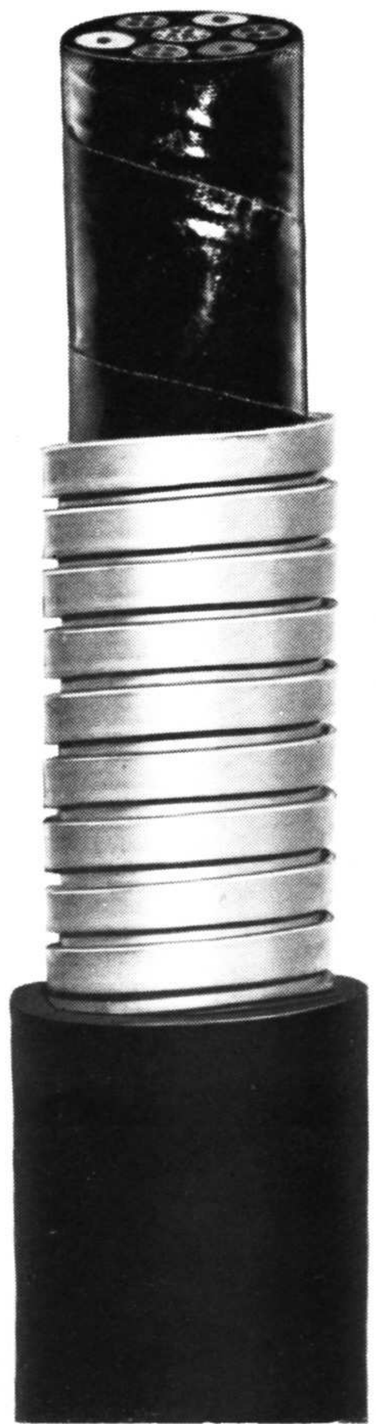
P.C.P. (polychloroprene) oversheaths applied over the screen are tougher, more abrasion resistant, and more flexible than P.V.C. Good weather resistance makes them suitable for outdoor use. Standard and extra thick oversheaths of P.C.P. are available for light and heavy duty. Standard P.C.P. sheaths are thicker than standard P.V.C. sheaths.

METAL REINFORCED P.C.P. OVERSHEATH

To provide maximum resistance to damage by crushing, impact or cutting edges, a metal reinforced oversheath can be slipped over the wire braid screen and securely sealed into the mouldings at each end or bonded to the demountable couplers. This oversheath is supplied in maximum lengths of 100 feet (30·48 m) and consists of a flexible metallic tube embedded in the P.C.P. sheath. This oversheath is used when maximum protection from mechanical damage is required.

SPECIAL DUTY OVERSHEATHS

Non-standard oversheaths for specialized uses, such as underwater or suspension cables, can be designed and supplied by BICC in commercial lengths.

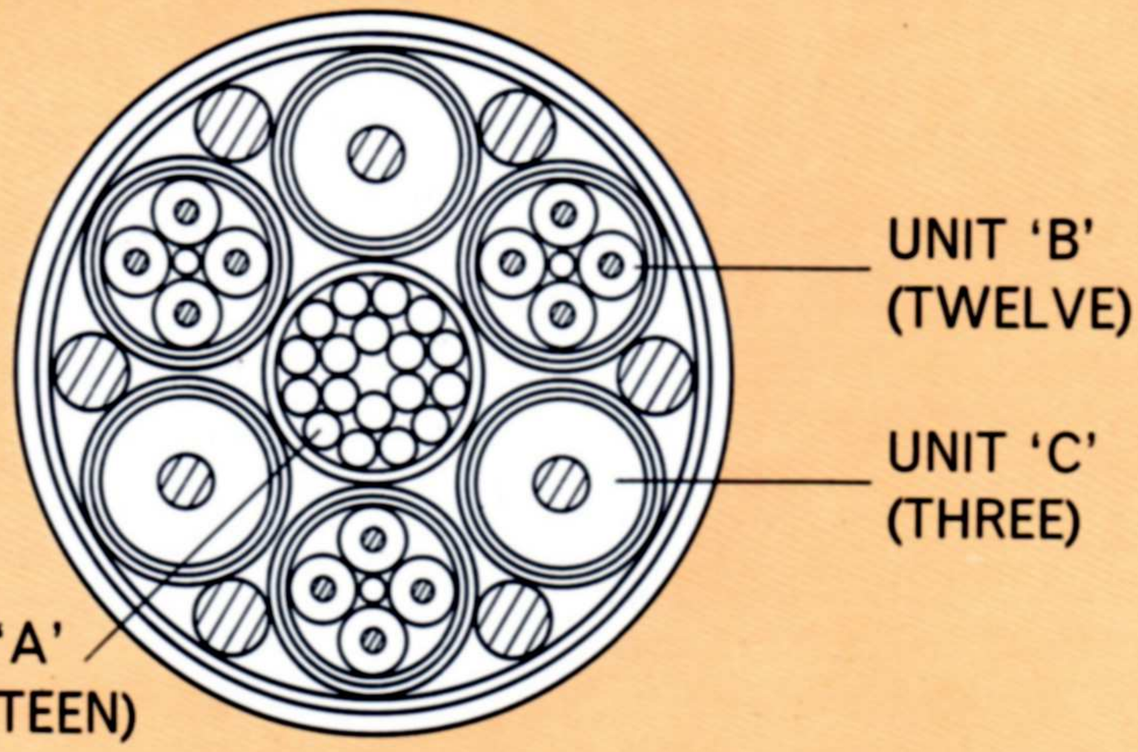


Basic construction with metal reinforced P.C.P. oversheath

STRANDED CONDUCTOR CABLES

BICC LIST Nos.
T1869, T1871
T1872, T1873

Nominal diameter over wire braid 0·776 inch (19·7 mm)



Basic construction

Eighteen control cores polypropylene insulated (Unit A) in centre and taped, with three coaxial cores (Unit C) and three screened quads polyethylene insulated (Unit B) laid around with six conductivity wires in the interstices, taped and screened, with wire braid and finished with an oversheath.

All cores are identified by colour.
Quad and coaxial cores by self-colour.
Control cores by colour banding.

	STRANDED CONDUCTOR TYPE	
COAXIAL CORES (UNIT C)		
Conductor size	7/·010 inch	*7/·25 mm*
Overall diameter	0·183 inch	*4·65 mm*
D.C. resistance	1·6 ohms/100 ft	*0·052 ohms/m*
Impedance	75 ohms	*75 ohms*
Attenuation 3 megacycles	0·49 dB/100 ft	*0·016 dB/m*
Capacitance	20 pF/ft	*66 pF/m*
SCREENED CONTROL CORES (UNIT B)		
Conductor size	7/·0148 inch	*7/·38 mm*
Overall diameter	0·079 inch	*2 mm*
D.C. resistance	0·75 ohms/100 ft	*0·025 ohms/m*
CONTROL CORES (UNIT A)		
Conductor size	7/·010 inch	*7/·25 mm*
Overall diameter	0·050 inch	*1·27 mm*
D.C. resistance	1·6 ohms/100 ft	*0·052 ohms/m*

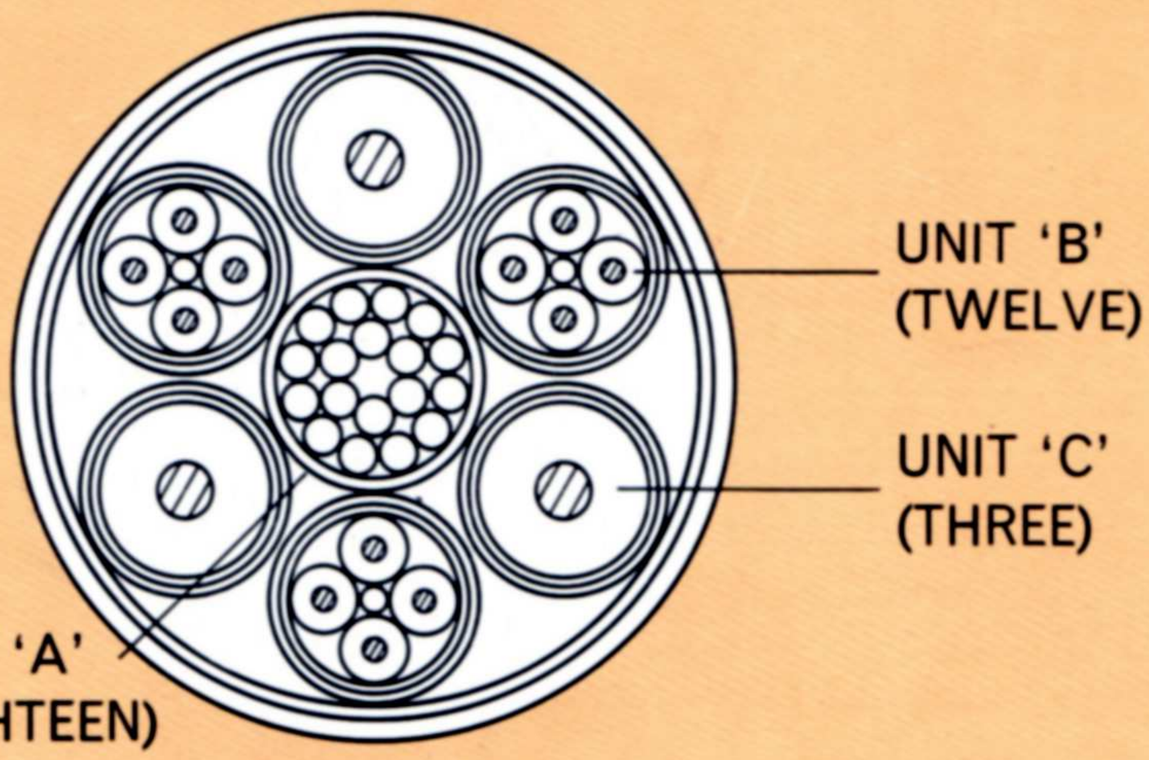
The following oversheaths are available applied over the wire braid
Each complete cable is identified by a BICC list number

List No.	Type of oversheath	Nominal overall diameter		Nominal weight		Minimum coiling diameter	
		inch	mm	lb/100 ft	kg/m	inch	cm
T1869	P.V.C. standard thickness (0·112 inch—*2·84 mm*)	0·900	*22·9*	51·2	*0·76*	15	*38*
T1871	P.C.P. standard thickness (0·125 inch—*3·17 mm*)	1·058	*26·9*	66·6	*0·99*	17	*43*
T1872	P.C.P. extra thickness (0·170 inch—*4·32 mm*)	1·128	*28·6*	75·7	*1·13*	18	*46*
T1873	P.C.P. sheath metal tube reinforced (0·200 inch—*5·08 mm*)	1·260	*32*	75·5	*1·13*	25	*63*

SOLID CONDUCTOR CABLES

BICC LIST Nos.
T1854, T1876
T1875, T1870

Nominal diameter over wire braid 0·588 inch (14·9 mm)



Basic construction

Eighteen control cores polypropylene insulated (Unit A) in centre and taped, with three coaxial cores (Unit C) and three screened quads polyethylene insulated (Unit B) laid around, then taped and screened with wire braid and finished with an oversheath.

All cores are identified by colour.
Quad and coaxial cores by self-colour.
Control cores by colour banding.

	SOLID CONDUCTOR TYPE	
COAXIAL CORES (UNIT C)		
Conductor size	1/·020 inch	*1/·51 mm*
Overall diameter	0·126 inch	*3·2 mm*
D.C. resistance	3·4 ohms/100 ft	*0·112 ohms/m*
Impedance	75 ohms	*75 ohms*
Attenuation 3 megacycles	0·75 dB/100 ft	*0·025 dB/m*
Capacitance	20 pF/ft	*66 pF/m*
SCREENED CONTROL CORES (UNIT B)		
Conductor size	1/·036 inch	*1/·91 mm*
Overall diameter	0·052 inch	*1·32 mm*
D.C. resistance	1·7 ohms/100 ft	*0·056 ohms/m*
CONTROL CORES (UNIT A)		
Conductor size	1/·020 inch	*1/·51 mm*
Overall diameter	0·035 inch	*0·89 mm*
D.C. resistance	2·7 ohms/100 ft	*0·089 ohms/m*

The following oversheaths are available applied over the wire braid
Each complete cable is identified by a BICC list number

List No.	Type of oversheath	Nominal overall diameter		Nominal weight		Minimum coiling diameter	
		inch	mm	lb/100 ft	kg/m	inch	cm
T1854	P.V.C. standard thickness (0·050 inch—*1·27 mm*)	0·688	*17·5*	30·7	*0·46*	11	*28*
T1876	P.C.P. standard thickness (0·100 inch—*2·54 mm*)	0·820	*20·8*	41·4	*0·62*	13	*33*
T1875	P.C.P. extra thickness (0·170 inch—*4·32 mm*)	0·995	*25·3*	59·9	*0·89*	16	*41*
T1870	P.C.P. sheath metal tube reinforced (0·190 inch—*4·83 mm*)	1·137	*28·9*	54·1	*0·81*	23	*58*

Though not exhaustive, the following list is a guide to the general applications of BICC television camera cables to broadcast and commercial closed circuit television.

T1854 Solid conductor standard P.V.C. oversheath—suitable for fixed studio wiring and light duty use on studio floors, or outdoors under light duty conditions.

T1869 Stranded conductor standard P.V.C. oversheath—suitable for fixed wiring and normal studio floor uses, or outdoors under light duty conditions.

T1876 Solid conductor P.C.P. oversheath—suitable for studios and medium duty use outdoors.

T1871 Stranded conductor P.C.P. oversheath—for general studio use and outdoor duties under medium duty conditions.

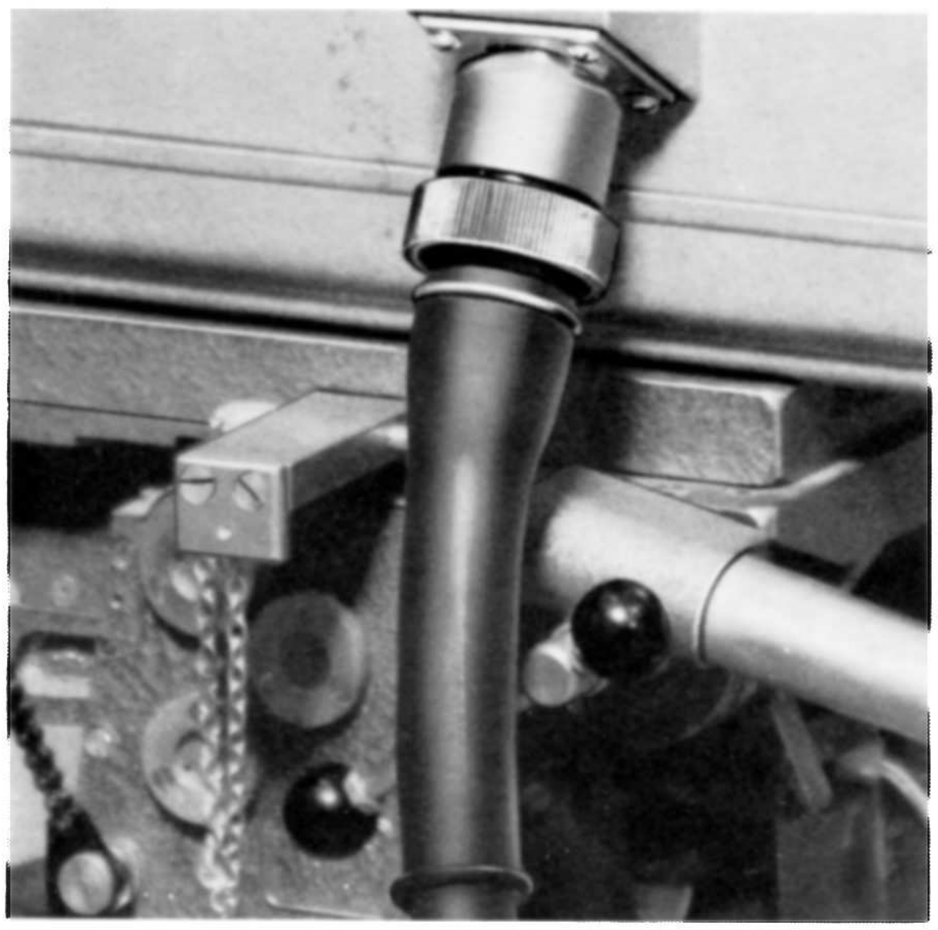
T1875 Solid conductors. Extra thick P.C.P. oversheath. For general studio use and heavy duty outdoors.

T1872 Stranded conductors. Extra thick P.C.P. oversheath. For general studio use and heavy duty outdoors.

T1870 Solid conductors. Reinforced metal tube. P.C.P. oversheath for severe conditions giving maximum protection against crushing and mechanical damage.

T1873 Stranded conductors. Reinforced metal tube. P.C.P. oversheath for severe conditions giving maximum protection against crushing and mechanical damage.

Showing coupler connections to camera and panel mountings in wall box



Coupler Systems

Each polypole coupler system is allotted a system reference which serves to identify each cable as well as the style of connector with which it is terminated. The system reference associated with television camera cables is given below, and this reference should be quoted in correspondence and on orders.

Moulded couplers with special screened contacts are available for use when several cables must be coupled together with minimum losses and interference. They are not available in demountable versions. These couplers are identified by an additional letter "S" in the system reference—thus D37S/26/12.

CABLE LIST No.	SYSTEM REFERENCE
T1854	D37/26/12
T1876	D37/28/12
T1875	D37/29/12
T1870	D37/64/12
T1869	D37/40/12
T1871	D37/68/12
T1872	D37/58/12
T1873	D37/57/12

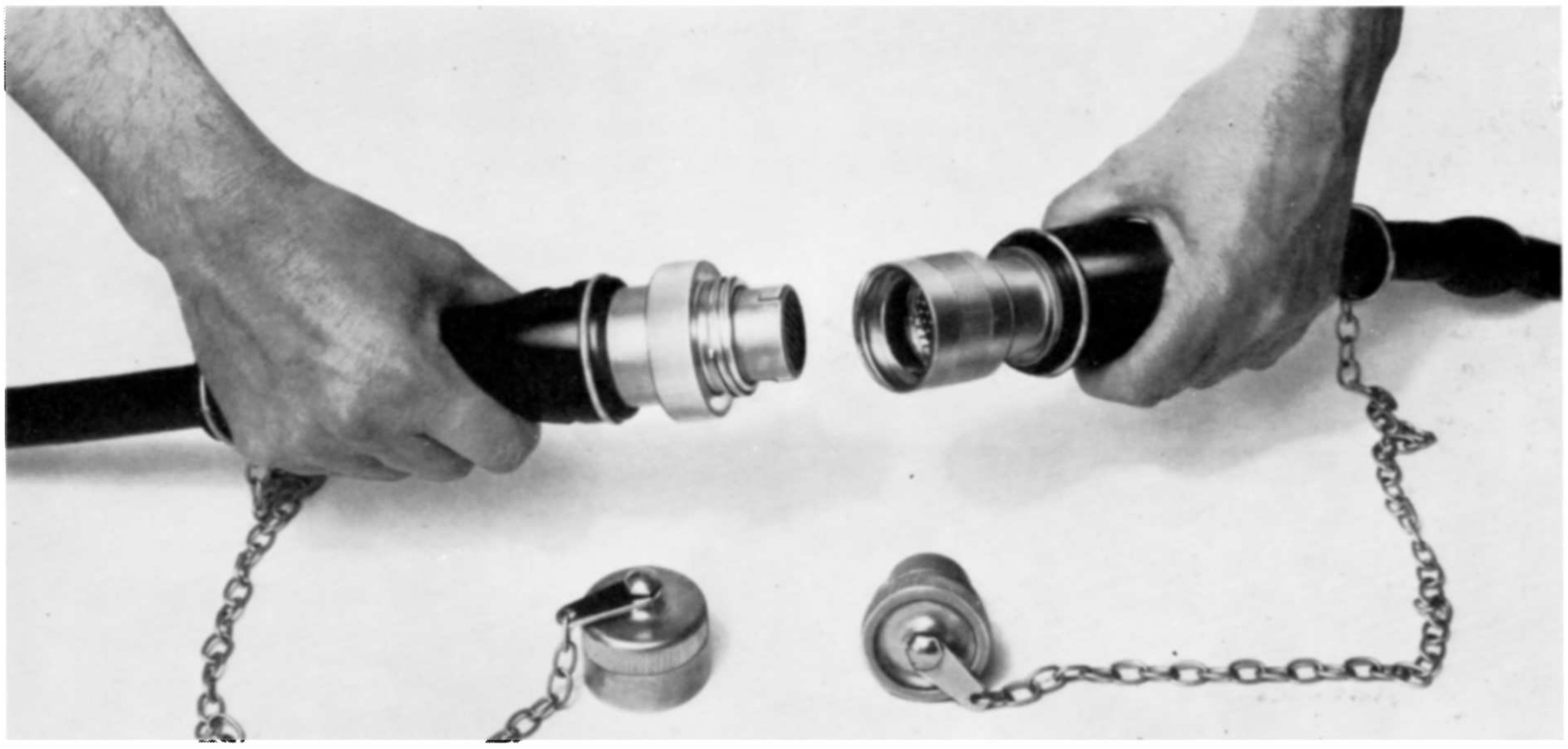
Individual coupler units (e.g. straight cable plug, panel mounting sockets, etc.) are also given a reference code for ease of identification, and a full list of coupler units and reference codes to mate with the above systems is given on page 8.

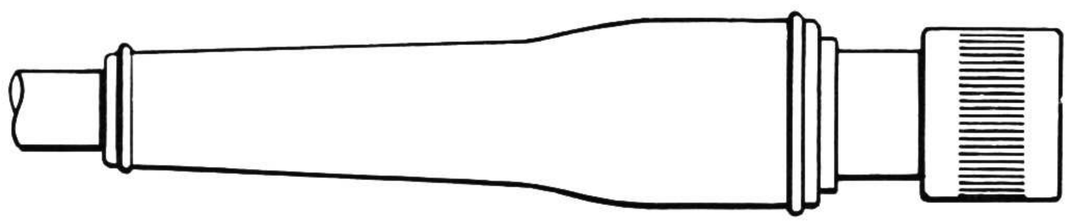
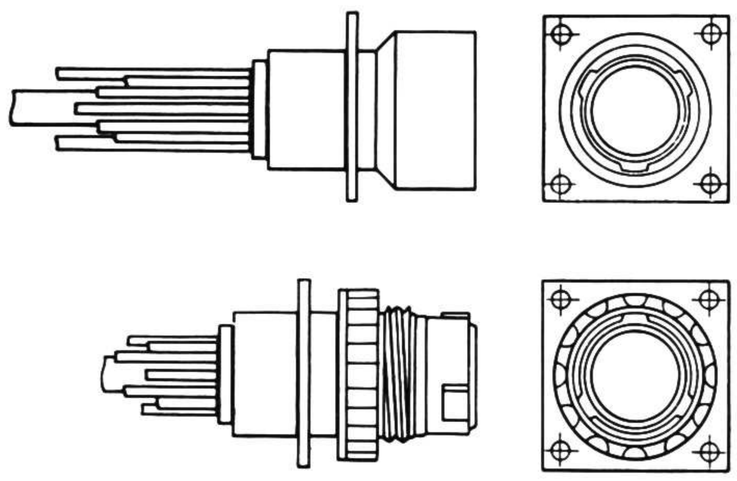
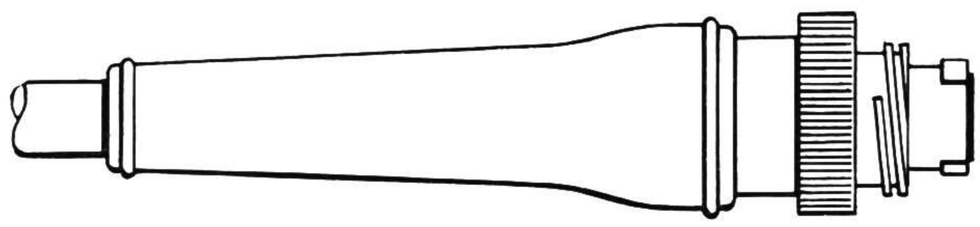
To order 250 feet of cable List No. T1869 terminated at one end by a right-angle cable plug and at the other end by a flanged cable socket, it is sufficient to quote the following reference:

D37/40/12	P2/S5		250 feet
System reference	Cable plug	Cable socket	Cable length

As new applications arise requiring different cable constructions or different styles of couplers, new system references are allocated but the coupler unit codes remain the same.

Straight coupler units with protective caps



Coupler units	Unit code reference	
Cable Plug		
Straight	P1	
Straight demountable	DP1	
Right-angle	P2	
Demountable right-angle	DP2	
Flanged straight	P5	
Flanged straight demountable	DP5	
Flanged right-angle	P6	
Panel Mountings		
Plug flexible tails	P3	
Plug fixed tails	P4	
Socket flexible tails	S3	
Socket fixed tails	S4	
Cable Socket		
Straight	S1	
Straight demountable	DS1	
Right-angle	S2	
Demountable right-angle	DS2	
Flanged straight	S5	
Flanged straight demountable	DS5	
Flanged right-angle	S6	
Shorting Plug	P7	
Shorting Socket	S7	

Accessories for use with the above:

Protective cap for plug coupler— Metal MC1
Plastic PC1

Protective cap for socket coupler— Metal MC2
Plastic PC2

Gripping tongs—T1

Hook spanner —T2

Publication No. 477

Printed in Great Britain

H&C/8M/264

BICC

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