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DR 6/11-135A and 135EC 1×N Frequency Diversity Operation and Maintenance Test Equipment and Accessories

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1 General

The test equipment required for the operation and maintenance of the DR 6/11-135 Digital Radio System is listed in Table A.

Table B lists test items needed in addition to the test equipment.

Table C lists adapters needed in addition to the adapters supplied with the test equipment.

Table D lists cables needed in addition to the cables supplied with the test equipment.

Table E lists tools needed for adjustments and repair.

NOTE:
If items listed in the tables are needed, contact the Technical Support Group (TSG) for ordering details.

All item quantities are one unless indicated otherwise in the item column.

Table A. Test Equipment

Item No.	Item	Description	Application
A1	Fluke, Model 8060A	Digital Multimeter	Voltage and resistance measurements
A2	HEWLETT-PACKARD*, 11758( ) Digital Radio Test System Consisting of: —8593A Spectrum Analyzer —11758 Digital Radio Test Set —Accessory Kit	Digital Radio Test System (DRTS)	Power measurements (IF and RF) Frequency measurements (IF and RF) Frequency source (IF and RF), continuous wave (cw) or swept 3-tone generator Spectrum Analyzer (IF and RF) Flatness Analyzer Event counter Multipath Fading Simulator
A3†	ANRITSU‡, Model ME453 (L or M)	System Analyzer	EDD testing
A4	SIEMENS§, Model DL 100 or DL 120 equipped with DLZ 102-6	Dummy load test set 6-foot test cable	TWT power supply testing
A5	DS3 Error Rate Test Set	DS3 Test Set	DS3 signal evaluation —"BLUE" signal detection —Parity and OOF detection

*Registered trademark of Hewlett-Packard Company.
†This item is normally not needed after system installation. If needed, contact TSG.
‡Registered trademark of Anritsu Kabushiki Kaisha.
§Registered trademark of Siemens Aktiengesellschaft.

Table B. Test Items

Item No.	Item	Description	Application
B1	AT&T, 64R split pad	75-ohm unequal loss split pad, small-WECO* (M)	S/I testing
B2	AT&T, 19H pad	75-ohm attenuator, 30 dB, SMB (M) to (F)	IF AGC Amplifier adjustment
B3	AT&T, 19H pad	75-ohm attenuator, 10 dB, SMB (M) to (F)	IF Predistorter bypass
B4	AT&T, 63A pad	75-ohm attenuator, 12 dB, small-WECO (M) to (F)	IF loopback testing (digital shelf)
B5	AT&T, ED-54693-30, G5 (two each)	75-ohm attenuator, variable (0 to 20 dB), SMB (M) to (M)	IF Combiner performance check and IF fade margin test
B6	AT&T, 924A	Card extender, 2-pin rolls, BELLPAC†	Circuit pack testing
B7	AT&T, 928A	Card extender, 3-pin rolls, BELLPAC	Circuit pack testing
B8	AT&T, ED-54785-30, G2	Card extender, 25-pin, RS232-type connector	Circuit pack testing, radio receiver ASE
B9	AT&T, 2671A Transformer	Equal loss, 3 dB splitting hybrid, small-WECO (F)	DADE measurements
B10	AT&T, 442A termination	75-ohm termination, small-WECO (M)	General use
B11	Midwest Microwave, Model 205M (two each)	50-ohm attenuator, 20 dB, SMB (M) to (F)	Down-Converter gain test and adjustment
B12	SEALECTRO‡, 61-101-0102	75-ohm termination, SMB (F)	General use
B13 §	NARDA¶, Model 793FM-SP	50-ohm attenuator, variable (0 to 20 dB), N-type (M) to (F)	RF fade margin test

*Small-WECO refers to the smaller 75-ohm connector manufactured by the Western Electric company, there is also a larger connector referred to as a large-WECO.
†Registered trademark jointly owned by the divested Bell Operating Companies.
‡Registered trademark of Sealectro Corporation.
§This item was retained from the Microwave Radio Test Set (MRTS).
¶Registered trademark of Narda Microwave Corporation.

Table C. Adapters

Item No.	Item	Description	Application
C1	AT&T, 187A	Adapter, small-WECO* (F) to large-WECO (M)	General use
C2	AT&T, 188A	Adapter, small-WECO (F) to large-WECO (F)	General use
C3	AT&T, 189A	Adapter, small-WECO (M) to large-WECO (M)	General use
C4	AT&T, 190A	Adapter, small-WECO (M) to large-WECO (F)	General use
C5	OMNI SPECTRA† No. 3082-2241-00 (2 each)	Adapter, N-type (F) to SMA (M)	General use
C6	POMONA‡ 3841	Adapter, N-type (F) to (F)	General use
C7	SEALECTRO§ 51-172-000	Adapter, SMB (M) to (M)	General use

*Small-WECO refers to the smaller 75-ohm connector manufactured by the Western Electric company, there is also a larger connector referred to as a large-WECO.
†Registered trademark of M/A-Com Omni Spectra, Inc.
‡Registered trademark of ITT Corporation.
§Registered trademark of Sealectro Corporation.

Table D. Cables

Item No.	Item	Description	Application
D1	AT&T ED-50225-20, G201	Cable assembly, 59-feet, 731 coaxial cable equipped with small-WECO* (M) and (F)	DADE measurements
D2	AT&T KS-19224, L2 (two each)	Cable assembly, 6-inch coaxial cable equipped with SMB (F) and small-WECO (F)	General use
D3	Adams Russell, F C15 cable, 1538-8223-533 (two each)	Cable assembly, 1-foot coaxial cable equipped with SMA (M) and (M)	Down-Converter testing (4300-Series)

*Small-WECO refers to the smaller 75-ohm connector manufactured by the Western Electric company, there is also a larger connector referred to as a large-WECO.

Table E. Tools

Item No.	Item	Description	Application
E1	AT&T, KS-6854, L1	Screwdriver, 3.5-inch	General use
E2	AT&T, KS-20116, L1	Screwdriver, 4-inch, nonmagnetic	Unit adjustments
E3	AT&T, KS-19099, L3	Extractor	Radio plug-in removal
E4*	AT&T, KS-22876, L3	Backplane pin kit	Repairing BELLPAC† pins
E5	AT&T, P49R560	Waveguide U-joint, 10-inch	Assembly and disassembly of waveguide apparatus
E6	AT&T, A17825 C-4	Screwdriver, 4-inch	General use
E7	SNAP-ON‡ 0X1-8	Combination wrench, 1/4 X 1/4	Assembly and disassembly of waveguide apparatus
E8	SNAP-ON DDS-112	Screwdriver, 2-inch	General use
E9	STANLEY§ 66-180	Screwdriver, 10-inch	TWT amplifier removal
E10	STANLEY 86-852	Open end wrench, 7mm	TWT amplifier and power supply removal
E11	SEALECTRO¶ 50-000-6854-210	Torque wrench, 25 ± 0.5 inch-lb.	TWT amplifier N-type connector tightening (6 GHz only)
E12	Kedman** 2358	Screwdriver, 8-inch, Quick-wedge	General use
E13	Kedman 17312	Screwdriver, 12-inch, Quick-wedge	General use

*This item is normally not needed after system installation. If needed, contact TSG.
†Registered trademark jointly owned by the divested Bell Operating Companies.
‡Trademark of Snap-On Tools Corporation.
§Registered trademark of the Stanley Works.
¶Registered trademark of Sealectro Corporation.
**Registered trademark of Kedman Company.