

ACC 10000/147/513

CS/4/23

T/36/CS Part II

INTERNAL PLANNING

OCT. - DEC. 1944

0307

HTM/epc

70

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489061 Ext: 555

22nd November, 1944

In reply
refer to: 4/23/70/CS

Subject : Specification for Trunk Switchboards.

To : Under-Secretary of State for PP.TT.

1. With reference to the meeting at this HQ. on Saturday, 18th November, and to the visit to the F.A.T.M.E. factory on 17th November, a specification has been prepared by C.S.O., L.of C. for the emergency trunk boards for military use.
2. It is proposed to use the same specification for boards for civil use at Milan, Genova, and Turin, the numbers of positions being eight, six and six, respectively.
3. Will you please signify early your agreement that the same specification will meet your requirements. Some of the equipment may be superfluous but it would probably be found useful.

J.L.HENDERSON
Colonel
Director,

Incl: One specification

47354

1942

File

	Planes	Volts	Cycles
1 Firenze	3	150/260	50
2 Genova	3	127/220	50
3 Milano	3	150/280 160/260	42
4 Bologna	3	127/220	42
5 Padova	3	127/220	42
6 Lodi (Firenze - Bologna road)	3	127/220	42
7 Chiavari	3	150/260	50
8 Spezia	3	200/350	42
9 Lucca	3	150/260	50
10 Poggio Renatico (between Bologna & Ferrara)	3	127/220	42
11 S. Dona Di Pave (" Venezia & Udine)	3	127/220	42
12 Udine	3	127/220	42
13 Trieste	3	127/220 100/100	42
14 Modena	3	127/220	42
15 S. Secondo (Sheet no 8: 1/200,000: F 0200)	3	140/250	42
16 Monte Baccaria (do. : K 3216)	3	127/220	42
17 S. Giuliano (Sheet 7: 1/200,000: K 8702)	3	150/260 127/220	42
18 Torino	3	127/220	50
19 Vercelli	3	127/220 150/150	42

1941

Rome - 5th Dec. 1941

Obtained from statistics 5/6 (last letter). Checked against MI report
Hofman

7	Chivari	✓	3	150/260	50
8	Spagna	✓	3	200/350	112
9	Lucra	✓	3	150/260	50
10	Poggio Renatico (between Bologna & Ferrara)		3	127/220	42
11	S. Dona Di Piave (" Venezia & Udine)		3	107/200	42
12	Udine	✓	3	127/220	42
13	Trieste	230	3	127/220 200/400	42
14	Modena	55 ✓	3	127/220	12
15	S. Secondo (Sheet no 8: 1/200,000: F.0200)	200/200	3	144/250	112
16	Monte Beccaria (do. : K3216)	✓	3	127/220	112
17	S. Giuliano (Sheet 7: 1/200,000: K8702)	210	3	150/260 127/220	112
18	Torino	✓	3	127/220	50
19	Vercelli	170	3	127/220 150/150	112

1941

Rome - 5th Dec. 1941

Obtained from statistics 1/2 (be happen). Checked against MI reports
and Consensus in's statements. ^{WJH} 5/12/44

file 154/23

*1. In planning
Return on 14/11/44*

SWITCHBOARD REQUIREMENTS NORTH OF
LIGNON - FLORENCE - ANCONA LINE.

CS/4/22

DATE NO. 111

NO. 111

Y/

20 OCTOBER 1944

Chief Signal Officer
A.F.M.C.

1. The attached memorandum contains a plan whereby switchboard stations north of the LIGNON-FLORENCE-ANCONA line, both military L. of C. common user and military government can be set from non-military resources within the country relieving tactical equipment for use elsewhere, and considerably reducing the amount of equipment which was to be supplied from military resources to the A.C.C. for military government purposes. This plan has been coordinated with the Communications Sub-Commission of the A.C.C.

2. To implement this plan transfer as the L. of C. is assumed it is necessary that a combined special project be issued, authorizing for use in accordance with this plan in Northern ITALY, north of the LIGNON-FLORENCE-ANCONA line, to provide essential L. of C. common user switchboard requirements, the following:

- (a) 2 - 6 position civil type L. P. switchboard (for UTIM & northern)
- 1 - 6 position civil type L. P. switchboard (for northern)

Equipment specific items to be furnished by Engineering Branch, C.S.O. L. of C. ITALY (NAPLES).

- (b) The 8 positions of TC-1 now at NAPLES and changed out to AT-10 to be allocated for use initially at UTIM.

- (c) 2 - 8 position MUX's for locality exchanges at the ports of GENOA and TRIESTE.

- (d) 1 - 3 position TC-10 for initial installation at UTIM.

3. Copy of the plan is being forwarded to Communications Sub-Commission A.C.C. for such action as may be desired.

4. It is hereby certified that the materials requested in paragraph 2 are for use on combined British-American projects.

1940

W.C. Buchanan

TS

LYMAN B. TUCKER,
Maj, Sig. Corps.
D.C.S.O. (A) L. of C. ITALY.

Friendship,
C.S.O. L. of C. ITALY.

DISTRIBUTION: Chief Comm. Sub Commission, A.C.C.
CSO L. of C ITALY (NAPLES) Signal Eng. Branch

SWITCHBOARD REQUIREMENTS NORTH OF
LEGHORN-FLORENCE-ANCONA LINE.

SECRET

MAIN IN AAI

TEL: FILPOT 366

1/20/39

28 OCTOBER 1944

1. Several reasons make it imperative to examine the supply of switchboards throughout ITALY north of the LEGHORN-FLORENCE-ANCONA Line.

- (a) Outline military common user switchboard requirements north of the LEGHORN-FLORENCE-ANCONA line as forecast in Combined Special Project AFHQ/9, Supplement #8 cover only the eastern section of the country and must now be revised to include the entire northern area.
- (b) Military government switchboard requirements for this area as forecast by A.C.G. have been approved to be provided from military sources.
- (c) Production of the FATME factory in ROME, capable of manufacturing complete switchboards (lamps lamps) and frames, is not available. SOS, NAIOUSA are having manufactured at FATME a total of 92 positions of local CB switchboard; 74 positions on these orders are unallocated.
- (d) A certain number of civilian switchboards are now undergoing rehabilitation and are available for allocation.

2. It is the purpose of this memorandum to formulate a coordinated plan for the supply and use of switchboards from the various available resources, insuring insofar as possible:

- (a) That military operational needs are met with first priority;
- (b) That military tactical equipment is used as little as possible, or, if used initially, is replaced at an early date with civilian type equipment, thereby relieving the tactical equipment for other military requirements;
- (c) That when civilian type equipment is installed for military purposes the installation will be done in such a way as to ultimately easily become part of the civilian system;
- (d) That the greatest possible economy in equipment is effected by combining various requirements.

Per 3 to sheet two//.....

- 2 -

3.
"A".

Total switchboard requirements yet to be scheduled are shown in Appendix

- (a) FLORENCE requirements have been met using civilian type switchboards with the exception of two additional L. D. positions required to make the total of four for Military Government.
- (b) An 8 position civilian switchboard has been obtained for military operational L. D. at BOLOGNA.
- (c) Military Government requirements are as shown on AFHQ requisition MGS-18A-SIG.
 - (i) These quantities are based on essential minimum requirements, contemplating finding no facilities available in the respective cities. In the case that equipment is found in place the ~~two~~ switchboards thus freed will be allocated to provide facilities in other localities.
 - (ii) Essential Military Government requirements in localities not covered in this plan can be met with smaller switchboards which can be found from civilian resources, or by boards as not needed in the preceding paragraph.
- (d) No military operational locality switchboards from civilian resources have been foreseen in Appendix "A" since it is felt such requirements are generally tactical and therefore transitory and can be met from organizational equipment, T/β/br G-1098, except in unusually large military ports or centers. It is proposed to install military locality boards in GENOA and TRIESTE using 8 position PMER's and in BOLOGNA, using a 6 position civil board or 900 line automatic civil board, depending upon which can be made available.
- (e) It will be noted that there are two L. D. switchboards foreseen in each location. No wastage is involved in installing civilian equipment for both of these requirements as standard Italian practice is to have two L. D. boards, one State operated and one commercial company operated, in each large city.

4. Switchboard availability is shown in Appendix "B". With the exception of the 8 position of TC-1 (from NAPLES) all boards shown will be available from non-military sources. Military equipment is not shown as it is planned to replace any military equipment which may be installed initially with non-military equipment. The 8 position TC-1 (from NAPLES) will likewise be replaced in the new location as soon as a board is available from non-military sources.

Par 5 to sheet 3//....

- 3 -

5. Recommendation as to the Supply of Switchboards.

Appendix "C" sets forth the requirements of both the military-operational and military government together with a proposed schedule of supply.

- (a) In all cases the final phase is considered. In the initial phase essential military government service will be given from the operational boards.
- (b) Where non-military equipment is foreseen but will not be available as early as required, it is proposed to install military equipment which will be replaced when the non-military boards become available. In the ultimate stage this plan does not envisage the use of any military equipment.
- (c) Implementation of this plan will require the provision of 6 (42 positions) non-military switchboards. Of these 3 (22 positions) are for military operational use and 3 (20 positions) for military government.

(i)	Mil Opr. Positions L. D.	Mil. Govt. Positions L. D.
GENOA	-	6
MILAN	6	8
TRIESTE	8	-
TORIN	<u>6</u> 22	<u>6</u> 20

- (ii) These L. D. switchboards can be manufactured in Italy (by FATME, the same factory which is producing the 92 local CB positions).
- (d) With respect to the 74 local C.B. positions on order at FATME and available for allocation, only 54 positions are required for the present overall plan.
- (i) In some cases the make up of the boards on order varies from those required as to the number of positions per board and size of multiple. Since final assembly on the boards has not been started arrangement to meet the requirements can be effected without difficulty.
- (e) The military operational L. D. switchboards are required in advance of the military government boards, both local and L. D., while the military government local boards are required before the military government L. D. boards. (the local boards have provision for same L. D. circuits, also L. D. circuits can be handled on the military operational board).
- (f) The following relative delivery schedule is proposed. Delivery is:

- 4 -

5. (cont) desired in the order given:

3 - 6 Pos. C. B. Boards (BOLZANO-TRIESTE
TRIESTE, Local)

16 Pos. as scheduled.

2 - 8 Pos. L. D. (MILAN & TRIESTE - MIL Govt.) A

1 - 6 Pos L. D. (TURIN - MIL Govt.)

as soon as possible

1 - 16 Pos. C. B. (MILAN Local)

1 - 10 Pos. C. B. (GENOVA Local)

1 - 10 Pos. C. B. (TURIN Local)

as
soon
as
possible

2 - 8 Pos. L. D. (GENOVA & MILAN - MIL Govt.)

1 - 6 Pos. L. D. (TURIN MIL Govt.)

as
soon
as
possible

Reminder of 20 positions C. B. now on order for similar
localities not foreseen in this plan, or as may be allocated.

(g) Specifications as to the equipment of the L. D. switchboards to be
supplied by Engineering Branch, C.S.O. I. of C. ITALY (NAPLES).

6. It is proposed that ARMO be requested to authorize under a combined
special project:

(a) The 22 L. D. positions for military operational use.

(b) The 8 positions of TC-1 now at NAPLES, now changed out to ARMO/10
to be used at MILAN.

(c) 1 - 8 position ARMO/10 for locality exchanges at GENOVA and TRIESTE.

(d) 1 - 2 position TC-10 initially to be installed at TURIN.

7. Military Government requirements and availability of equipment have
been coordinated with the Communications Sub-Commission I. C. C.

A copy of this memorandum is being forwarded to A.C.C. to permit
continued coordination on their part in the procurement of the military
government requirements.

LR:IE

1937
Lynnan B. Tucker
LTCIAN C. TUCKER,
Maj. Sig. Corps.
D.C.S.O. I. OF C. ITALY.

APPENDIX "A" SWITCHBOARD REQUIREMENTS NORTH OF LEGHORN-FLORENCE-ANCONA LINE
-----TOTAL REQUIREMENTS (To be scheduled)

	<u>Mil. Opr.</u> <u>L.D.</u>	<u>Mil. Govt.</u> <u>L.D.</u>	<u>Mil. Govt.</u> <u>Local (Lines).</u>
1. * FLORENCE	-	4	-
2. ** BOLOGNA	-	4	6 (800)
3. VENICE (SS-TH)	6	4	6 (800)
4. GENOA	8	6	10 (1,000)
5. MILAN	8	8	16 (2000)
6. TRIESTE	8	2	6 (800)
7. TURIN	<u>6</u>	<u>6</u>	<u>10</u> (1400)
	36	34	54

* FLORENCE

Ten positions civil type switchboard in use for military operational L.D.
Two positions civil type switchboard already available in FLORENCE.
Local service by civilian auto exchange.

** BOLOGNA

Eight positions civil type switchboard available and allocated.

1956

APPENDIX "B" SWITCHBOARD & CIRCUMENTS NORTH OF LEAHORN-FLORENCE DEBARCO LINE

SWITCHBOARD AVAILABILITY

LONG DISTANCE

14 Pos. Standard "old" State from FLORENCE
now being rehabilitated in ROME.

Dec. 16, if parts available.

12 Pos. Standard "new" STATE (see above)

Dec. 16, if parts available.

26 Pos. Total civilian.

8 Pos. TC-1 NAPLES

Dec. 1

LOCAL

ELITE (POS. NITONIA)

3 - 6 Pos. C.B.

Dec. 16.

1 - 20 Pos. C.B.

Jan. 23.

2 - 8 Pos. C.B.

Feb. 22.

1 - 20 Pos. C.B.

Mar. 24

OTHER

3 - 1 Pos. combined local and Toll
at TETI FLORENCE.

At once. Can be used as local
or temporary toll board.

1 - 4 Pos. at Adv. Telecons Bn.

At once, subject to check on
missing parts.

AUTO

1 - 500 step x step - TETI FLORENCE

At once.

1 - 200 line Rotary - A.C.C. ROME

At once, subject to check on
missing parts

1 - 500 line Autelco - A.C.C. ROME

At once, subject to check on
missing parts.

1 - 2000 line Rotary - A.C.C. ROME

At once, subject to check
on missing parts.

1985

APPENDIX "C" SWITCHBOARD RE REQUIREMENTS NORTH OF LAMBERT-FLORENCE-ANCONA LINE
-----REQUIREMENTALLOCATION1. FLORENCE

Military Government L. D. 4 Pos.

2 Pos. in place.
2 Pos. to be provided from rehabilitation "new" State L. D. switchboard now at FACE.2. BOLOGNA

Military Government L. D. 4 Pos.

4 Pos. from rehabilitation "new" State L. D. switchboard now at FACE.

Military Government Local 6 Pos.

FATME 6 Pos. CB to be ready 16 Dec.

3. VENICE (MESTRE)

Military Operational L. D. 6 Pos.

Install initially 200 line command board from AFHQ/9 Supp. #6, ultimately 6 Pos. from rehabilitation "old" State L. D. switchboard now at FACE.

Military Government L. D. 4 Pos.

4 Pos. from rehabilitation "new" State L. D. switchboard now at FACE.

Military Government Local 6 Pos.

FATME 6 Pos. to be ready 16 Dec.

4. CINOA

Military Operational L. D. 8 Pos.

Install initially 3 Pos. TC-1 or TC-10 to be provided from combined project stocks. Ultimately 8 Pos. from rehabilitation "old" State switchboard now at FACE.

Military Government L. D. 6 Pos.

To be ordered on FATME. Initially install one position to be found by A.C.C. from civilian sources. (Mark provisionally one of the 3 positions now in use in FLORENCE as Military Operational L. D.)

Military Government Local 10 Pos.

FATME 10 Pos. CB from 10 Pos. CB to be ready 23 Jan. 1945. Increase multiple to full capacity of 1000 CB lines.

1944
2nd wave of Florence
4 CB
New plane
batteries

APPENDIX "C" SWITCHBOARD REQUIREMENTS NORTH OF LEXHORN-FLORENCE-ANCONA LINE (page 2)

REQUIREMENTALLOCATION5. MILAN

Military Operational L. D. 8 Pos.

Install initially 8 Pos. TC-1 from NAPLES. Order on FATME 8 Pos. L. D. switchboard for ultimate installation.

Military Government L. D. 8 Pos.

Install initially one position to be found by A.C.C. from civilian sources. (earmark provisionally one of the 3 Pos. now in use at FLORENCE as Mil. Opr. L. D.) Order 8 Pos. L. D. switchboard on FATME for ultimate installation.

Military Government Local 16 Pos.

Revise present orders on FATME to schedule 16 Pos. CB.

6. TRIESTE

Military Operational L. D. 8 Pos.

Install initially 200 line command board from Project APHQ/9 Supp. #8. Order 8 Pos. L. D. switchboard on FATME for ultimate installation.

Military Government L. D. 2 Pos.

Use 2 Pos. from "new" State L. D. switchboard now being rehabilitated by FACE.

Military Government Local 6 Pos. CB

FATME 6 Pos. CB to be ready 16 Dec.

7. TURIN

Military Operational L. D. 6 Pos.

Install initially a TC-1 or TC-10 from combined project stocks. Order 6 Pos. L. D. switchboard on FATME for ultimate installation.

Military Government L. D. 6 Pos.

Install initially one position to be found by A.C.C. from civilian sources. (earmark provisionally one of the 3 Pos. now in use at FLORENCE as Mil. Opr. L. D.) Order 6 Pos. L. D. switchboard on FATME for ultimate installation.

Military Government Local 10 Pos.

FATME 10 Pos. CB from 20 Pos. CB to be ready 23 Jan. 1945. Increase multiple to full capacity of 1000 CB lines.

CONFIDENTIAL

CONFIDENTIAL

ALLIED FORCE HEADQUARTERS

LAC AIRGRAM 39, 29 June 1944.

From : FHCEG
To : CCS, for CCAC (4 copies)
Subject: Requisition Number MGS-184-SIG.
Ship to: NAPLES consigned to Communications Subcommission, A.C.C., with delivery as follows:-
Items 1 to 24, inc. - immediate shipment.
Items 25 to end - required roughly in order as shown, as soon as possible after 1 July.
(The Serial No. of each consignment must include the letters TOG. Packages must be marked with standard approved markings of green dots on crossed white tape).

The following items are requested for allocation in relation to their availability and the CCAC's appraisal of the justification. The quantities requested give effect to screening by this headquarters.

If allocation is approved it is requested that procurement be initiated and this headquarters advised so that normal supply procedure may be effected.

Item No.	Stock No.	Article	Unit	Required
1	None	SWITCH BOARD, TOLL TYPE, long distance, 8 position, equipped for 30 ring-down long distance trunks, complete with relay sets; trunks being multipled on alternate positions; in addition to trunk multiple, four appearances of 20 each jacks and lamps without associated relay equipment.	Ea.	1
2	"	RINGING MACHINE, 17 or 20 cycle, mains driven, to operate on 150 volts at 45 cycles, for use with item 1. (no other power plant required for item 1).	"	1
3	"	BRIDGE MEGGER, (or Wheatstone bridge and insulation megger) for battery operation.	"	1
4	"	TRANSMISSION MEASURING SETS, portable, with V.F. oscillators.	"	1
5	78-9329.2	TRUCK, CARGO, BODY, 1-1/2 ton, 4 x 4, 2-DT.	"	1

To : CCS, for CCAC (4 copies)

Subject: Requisition Number MGS-184-SIG.

Ship to: NAPLES consigned to Communications Subcommittee, A.C.C., with delivery as follows:-

Items 1 to 24, inc. - immediate shipment.
Items 25 to end - required roughly in order as shown, as soon as possible after 1 July.

(The Serial No. of each consignment must include the letters TOG. Packages must be marked with standard approved markings of green dots on crossed white tape).

The following items are requested for allocation in relation to their availability and the CCAC's appraisal of the justification. The quantities requested give effect to screening by this headquarters.

If allocation is approved it is requested that procurement be initiated and this headquarters advised so that normal supply procedure may be effected.

Item No.	Stock No.	Article	Unit	Required
1	None	<u>SWITCH BOARD, TOLL TYPE,</u> long distance, 8 position, equipped for 30 ring-down long distance trunks, complete with relay sets; trunks being multipled on alternate positions; in addition to trunk multiple, four appearances of 20 each jacks and lamps without associated relay equipment.	Ea.	1
2	"	<u>RINGING MACHINE,</u> 17 or 20 cycle, mains driven, to operate on 150 volts at 45 cycles, for use with item 1. (no other power plant required for item 1).	"	1
3	"	<u>BRIDGE MEGGER,</u> (or Wheatstone bridge and insulation megger) for battery operation.	"	1
4	"	<u>TRANSMISSION MEASURING SETS,</u> portable, with V.F. oscillators.	"	2
5	73-9329.2	<u>TRUCK, CARGO, BODY,</u> 1-1/2 ton, 4 x 4, 2-DT.	"	30
6	None	<u>TRUCK, CARGO, BODY,</u> 3/4 ton, 1500 WT.	"	20
7	"	<u>TEST DESK or TEST CASE,</u> with equipment, including spare voltmeter.	"	1
8	"	<u>BRIDGE MEGGER,</u> (or Wheatstone bridge and insulation megger), for battery operation.	"	1

CONFIDENTIAL

<u>No.</u>	<u>No.</u>	<u>Article</u>	<u>Unit</u>	<u>Required</u>
9	None	<u>MAINTENANCE SET,</u> tools, for CB exchange.	St.	M 3
10	"	<u>SOLDER, TIN-LEAD,</u> wire, resin core, for internal connection.	Lb.	M 1,000
11	"	<u>SOLDER, TIN-LEAD,</u> solid, for plumbing underground cable joints, together with sufficient splicing material (less lead, sleeves) for 500 splices.	Lb.	1,000
12	"	<u>SLEEVE, JOINTING,</u> paper, for underground cable	Ea.	M 50,000
13	"	<u>RINGING MACHINE,</u> 17 or 20 cycle, battery driven, (* see note at end of page 6) to be driven off filament battery (it is assumed that this can be done without noise at the repeaters).	Ea.	1
14	"	<u>REPEATER,</u> 4-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 22 terminating 4 wire repeaters. 1 lot of 6 terminating 4 wire repeaters. 1 lot of 6 terminating and 6 through 4-wire repeaters. 3 lots of 12 through 4-wire repeaters each. 3 lots of 6 through 4-wire repeaters each.		MILITARY 94
15	"	<u>REPEATER,</u> 2-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 8 2 lots of 4 each.		MILITARY 16
16	"	<u>NOTE:</u> The repeaters in Items 14 and 15 are for use on underground cable with the following characteristics: 4-wire repeater: H-44-17 loading; 19 gauge or 20 lb. conductor. 2-wire repeaters: H-172-63 loading; 16 gauge or 40 lb. conductor.		
17	"	<u>RINGING EQUIPMENT SET,</u> 4-wire, 500/20 or 1,000/20, with bay capacity to accommodate the following: 1 lot of 22. 2 lots of 6 each.		MILITARY 34
17	"	<u>RINGING EQUIPMENT SET,</u> 2-wire, 500/20 or 1,000/20, with bay capacity to accommodate the following: 1 lot of 22. 2 lots of 6 each.		MILITARY 34

12	"	SLEEVE, JOINTING, paper, for underground cable	Ea. 50,000	
13	"	RINGING MACHINE, 17 or 20 cycle, battery driven, (* see note at end of Page 8) to be driven off filament battery (it is assumed that this can be done without noise at the repeaters).	Ea. 1	PATME
14	"	REPEATER, 4-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 22 terminating 4 wire repeaters. 1 lot of 6 terminating 4 wire repeaters. 1 lot of 6 terminating and 6 through 4- wire repeaters. 3 lots of 12 through 4-wire repeaters each. 3 lots of 6 through 4-wire repeaters each.	94	MILITARY
15	"	REPEATER, 2-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 8 2 lots of 4 each. NOTE: The repeaters in Items 14 and 15 are for use on underground cable with the following characteristics: 4-wire repeater: H-44-17 loading; 19 gauge or 20 lb. conductor. 2-wire repeaters: H-172-63 loading; 16 gauge or 40 lb. conductor.	16	MILITARY
16	"	RINGING EQUIPMENT SET, 4-wire, 500/20 or 1,000/20, with bay capacity to accommodate the following: 1 lot of 22. 2 lots of 6 each.	34	MILITARY
17	"	RINGING EQUIPMENT SET, 2-wire, 500/20 or 1,000/20, with bay capac- ity to accommodate the following: 1 lot of 8. 2 lots of 4 each.	16	MILITARY
18	"	BAY, equipped for transmission and resistance measurements, cable fault localization, and testing, complete with oscillator.	1	St.
19	"	TRANSMISSION MEASURING SET, portable, for battery operation.	7 MS 1	M2

CONFIDENTIAL

Item No.	Stock No.	Article	Unit	Required
20	None	BAY, capable of taking cable termination for 400 pairs.	St. 1	1
21	"	BATTERY, FILAMENT, capable of taking forty 4-wire repeaters, 20 ringing equipments, and a ringing machine load, each battery to have a capacity for 48 hours' service.	MIL OR COMMERCIAL Ea. 2	2
22	"	BATTERY, PLATE, capable of taking forty 4-wire repeaters, each battery to have a capacity for 48 hours' service.	120 VOLT Ea. 2	2
23	"	ENGINE, PETROL OR PARAFFIN, DRIVEN, each driving two generators for charging batteries in Items 21 and 22 at 7 hours' rate; complete with spare parts.	M " 2	2
24	"	WIRE, CADMIUM-COPPER, 70 lbs. per mile, single conductor, bare solid; or .080 copperweld type (or equal) Ft. 5,250,000	" " 1	1
25	"	SWITCHBOARD, CB multiple, 16-position, equipped with 2,000 subscribers line circuits, 20 automatic junction circuits, and 20 automatic CB junction circuits; complete with subscribers relay sets and junction relay sets; miscellaneous circuits (such as cord test, interposition trunks, etc.) fuses; spare parts.	Ea. 1	1
26	"	DISTRIBUTION FRAME, main, 4,000 pairs capacity.	" FAT 1	1
27	"	DISTRIBUTION FRAME, intermediate.	" FAT 1	1
28	"	TEST CASE, with equipment, including voltmeter.	" FAT 1	1
29	"	BATTERY, STORAGE, voltage as of switchboard (Item 25), 1,000 amp. hours capacity.	" FAT 2	2
30	"	GENERATOR, petrol or paraffin engine, output 140 amps. at normal battery charging voltage for Item 29, complete with voltage hand regulator, spare parts.	" 1954 2	2
31	"	RINGING MACHINE, battery-driven, for use with Item 25.	" FAT 1	1

23	"	capable of taking forty 4-wire repeaters, each battery to have a capacity for 48 hours' service.	120 x 20 x 10	2
24	"	ENGINE, PETROL OR PARAFFIN, DRIVEN, each driving two generators for charging batteries in Items 21 and 22 at 7 hours' rate; complete with spare parts.	M	2
25	"	WIRE, CADMIUM-COPPER, 70 lbs. per mile, single conductor, bare solid; or .080 copperweld type (or equal) Ft. 5,280,000	M	
26	"	SWITCHBOARD, CB multiple, 16-position, equipped with 2,000 subscribers line circuits, 20 mag-neto-junction circuits, and 20 automatic CB junction circuits; complete with subscribers relay sets and junction re-lay sets; miscellaneous circuits (such as cord test, interposition trunks, etc.) fuses; spare parts.	FATME	1
27	"	DISTRIBUTION FRAME, main, 4,000 pairs capacity.	" FAT 1	1
28	"	DISTRIBUTION FRAME, intermediate.	" FAT 1	1
29	"	TEST CASE, with equipment, including voltmeter.	" FAT 1	1
30	"	BATTERY, STORAGE, voltage as of switchboard (Item 25), 1,000 amp. hours capacity.	" FAT 2	2
31	"	GENERATOR, petrol or paraffin engine, output 140 amps. at normal battery charging voltage for Item 29, complete with voltage hand regulator, spare parts.	10501	2
32	"	RINGING MACHINE, battery-driven, for use with Item 25.	" FAT 1	1
33	"	CABLE, SWITCHBOARD, 42-wire. 21 PAIR	MIL. Ft. 10,560	
34	"	CABLE, SWITCHBOARD, 63-wire. (56551VTE)	MIL. " 15,840	
35	"	WIRE, JUMPER, (cross-connecting), for Items 26 & 27.	MIL. " 10,560	
36	"	MAINTENANCE SET, tools for CB exchange.	M CONFIDENTIAL	

CONFIDENTIAL

Item
No.

Stock
No.

Article

Unit

Required

36 None
SOLDER, TIN-LEAD, wire, resin core, for internal connections. M lb. 1,000

37 " SOLDER, TIN-LEAD, solid, for plumbing underground cable joints, together with sufficient splicing material (less lead sleeves) for 500 splices. M " 1,000

38 " SLEEVE, JOINTING, paper, for underground cable. Ea. M 50,000

39 " SWITCHBOARD, TOLL TYPE, long distance, 6-positions equipped for 20 ring-down long distance trunks and 20 junctions to board covered by Item 25 all with relay sets; trunks to be multiplied on alternate positions. " 1

40 " RINGING MACHINE, 17 or 20 cycle battery driven, for use with Item 39, to be driven off filament battery. PAT " 1

41 " REPEATER, 4-wire, with bay capacity to accommodate repeaters in following lots: M
1 lot of 13 through 4-wire repeaters.
4 lots of 10 through 4-wire repeaters.
1 lot of 3 terminating and 7 through 4-wire repeaters.
1 lot of 8 terminating 4-wire repeaters.
1 lot of 4 terminating 4-wire repeaters.
1 lot of 6 through 4-wire repeaters.
1 lot of 4 through 4-wire repeaters.
1 lot of 3 through 4-wire repeaters. Ea. 83

42 " REPEATERS, 2-wire, with bay capacity to accommodate repeaters in following lots: M
1 lot of 14.
1 lot of 13.
1 lot of 12.
4 lots of 6 each.
2 lots of 5 each.
6 lots of 3 each. Ea. 91

NOTE: The repeaters in Items 41 and 42 are for use on underground cable with the following characteristics:
4-wire repeater: (H-44-17) loading: 19 gauge or 20 lb. conductor.

38	"	<u>SLEEVE, JOINTING,</u> paper, for underground cable.	Ea. <i>M</i> 50,000	
39	"	<u>SWITCHBOARD, TOLL TYPE,</u> long distance, 6-positions equipped for 20 ring-down long distance trunks and 20 junctions to board covered by Item 25 all with relay sets; trunks to be multiplied on alternate positions.	"	<i>STATE</i> 1
40	"	<u>RINGING MACHINE,</u> 17 or 20 cycle battery driven, for use with Item 39, to be driven off filament battery.	"	<i>FAT</i> 1
41	"	<u>REPEATER,</u> 4-wire, with bay capacity to accom- odate repeaters in following lots: 1 lot of 13 through 4-wire repeaters. 4 lots of 10 through 4-wire repeaters. 1 lot of 3 terminating and 7 through 4-wire repeaters. 1 lot of 8 terminating 4-wire repeat- ers. 1 lot of 4 terminating 4-wire repeat- ers. 1 lot of 6 through 4-wire repeaters 1 lot of 4 through 4-wire repeaters. 1 lot of 3 through 4-wire repeaters. Ea.		<i>M</i> 83
42	"	<u>REPEATERS,</u> 2-wire, with bay capacity to accom- odate repeaters in following lots: 1 lot of 14. 1 lot of 13. 1 lot of 12. 4 lots of 6 each. 2 lots of 5 each. 6 lots of 3 each.	Ea.	<i>M</i> 91
43	"	<u>NOTE:</u> The repeaters in Items 41 and 42 are for use on underground cable with the following character- istics: 4-wire repeater: (H-44-17) loading: 19 gauge or 20 lb. conductor. 2-wire repeaters: H-172-63 loading: 16 gauge or 40 lb. conductor.		
		<u>RINGING EQUIPMENT SET,</u> 4-wire, 500/20 or 1,000/20, with bay capacity to accommodate 3 lots of 3 each.	St.	<i>M</i> 9

CONFIDENTIAL

CONFIDENTIAL

Item No.	Stock No.	Article.	Unit.	Required.
44	None	RINGING EQUIPMENT SET, 2-wire, 500/20 or 1,000/20, with bay capacity to accommodate one lot of each of the following: 14, 13, 11, 6, 5, and 3.	St. M	52
45	"	BAY, equipped for transmission and resistance measurement; cable fault localization, and testing, complete with oscillators.	St.	6
46	"	AVOLMETER, or voltmeters and current flow test sets.	Ea. M	2
46a	"	TRANSMISSION MEASURING SET, portable, for battery operation.	St. M	4
47	"	BAY, capable of taking cable termination for 200 pairs.	"	18
48	"	BATTERY, FILAMENT, capable of taking forty 4-wire repeaters, 20 ringing equipments, and a ringing machine load, each battery to have a capacity for 48 hours' service.	Ea.	8
49	"	BATTERY, PLATE, capable of taking forty 4-wire repeaters, each battery to have a capacity for 48 hrs' service.	"	8
50	"	BATTERY, FILAMENT, capable of taking twenty 4-wire repeaters, 20 ringing equipments, and a ringing machine load, each battery to have a capacity for 48 hours' service.	"	12
51	"	BATTERY, PLATE, capable of taking twenty 4-wire repeaters, each battery to have a capacity for 48 hours' service.	"	12
52	"	BATTERY, FILAMENT, capable of taking ten 4-wire repeaters and 10 ringing equipments, each battery to have a capacity for 48 hours' service.	1000	16
53	"	BATTERY, PLATE, capable of taking ten 4-wire repeaters.	"	

9

64

七

10



27

22

2

16

5

5

CONFIDENTIAL

Item No.	Stock No.	Article	Unit	Required.
56	None	<u>SWITCHBOARD.</u> CB multiple, 10-position, equipped with 1,400 subscribers line circuits, 20 magneto junction circuits, and 20 automatic CB junction circuits, complete with subscribers relay sets and junction relay sets, miscellaneous circuits (such as cord test, inter position trunks, etc.), fuses spare parts.	Ea.	2
57	"	<u>SWITCHBOARD.</u> CB multiple, 6-positions, equipped with 800 subscribers line circuits 20 magneto junction circuits, and 20 automatic CB junction circuits, complete with subscribers relay sets and junction relay sets, miscellaneous circuits (such as cord test, inter position trunks, etc.) fuses, spare parts.	"	3
58	"	<u>DISTRIBUTION FRAME.</u> main, 3,000 pairs capacity, complete with protection.	"	2
59	"	<u>DISTRIBUTION FRAME.</u> main, 2,000 pairs capacity, complete with protection.	"	3
60	"	<u>DISTRIBUTION FRAME.</u> intermediate (to be associated with main distribution frames, Items 58 & 59; combined MDF and IDF will suffice in each case, provided the main frame sections have the required capacity).	"	5
61	"	<u>BATTERY, STORAGE.</u> voltage as of switchboard (Item 56), 800 amp. hours capacity.	"	4
62	"	<u>BATTERY, STORAGE.</u> voltage as of switchboard (Item 57), 600 amp. hours capacity.	"	6
63	"	<u>TEST CASE.</u> with equipment; including voltmeter.	"	5
64	"	<u>GENERATOR.</u> petrol or paraffin engine driven, output 110 amps. at normal battery charge.	"	1

57	"	FA T	2
ous circuits (such as cord test, inter position trunks, etc.), fuses spare parts.			
58	"		2
59	"		3
60	"		5
61	"		4
62	"		6
63	"		5
64	"		2
65	"		4
66	"		5

57 SWITCHBOARD, 6-positions, equipped with 800 subscribers line circuits 20 magneto junction circuits, and 20 automatic CB junction circuits, complete with subscribers relay sets and junction relay sets, miscellaneous circuits (such as cord test, inter position trunks, etc.) fuses, spare parts.

58 DISTRIBUTION FRAME, main, 3,000 pairs capacity, complete with protection.

59 DISTRIBUTION FRAME, main, 2,000 pairs capacity, complete with protection.

60 DISTRIBUTION FRAME, intermediate (to be associated with main distribution frames, Items 58 & 59; combined MDF and IDF will suffice in each case, provided the main frame sections have the required capacity).

61 BATTERY STORAGE, voltage as of switchboard (Item 56), 800 amp. hours capacity.

62 BATTERY STORAGE, voltage as of switchboard (Item 57), 600 amp. hours capacity.

63 TEST CASE, with equipment; including voltmeter.

64 GENERATOR, petrol or paraffin engine driven, output 110 amps. at normal battery charging voltage for Item 61, complete with voltage hand regulator, spare parts.

65 GENERATOR, petrol or paraffin engine driven, output 80 amps. at normal battery charging voltage for Item 62, complete with voltage hand regulator, spare parts.

66 RINGING-MACHINE, battery-driven, for use with Items 56 & 57, complete with spare parts.

CONFIDENTIAL

S. G. M. A. - 5-44 - 1450 - 250,000

CONFIDENTIALItem
No.Stock
No.

Article

Unit

Required

67 None

CABLE, SWITCHBOARD,
42-wire.

M

Ft. 14,560

68

CABLE, SWITCHBOARD,
63-wire.

M

" 19,340

69

WIRE, JUMPER,
(cross-connecting)

M

" 13,560

70

SWITCHBOARD, TOLL TYPE,
long distance, 4-position, equipped
for 20 ring-down long distance trunks,
one switchboard with 10 junctions to
the board covered by Item 56 and two
switchboards each with 10 junctions
to one of the boards covered by Item
57 (i.e., the third board under Item
57 will have no junctions to a toll
board), each with relay sets, trunks
to be multipled on alternate posi-
tions.

Ea. 4

71

RINGING MACHINE,
17 or 18 cycle, battery driven, for
use with Item 70, to be driven off
filament battery.

FAME

" 4

72

MAINTENANCE SET,
tools, for CB exchange.

St. M 12

73 78-9329.2

TRUCK, CARGO BODY,
1-1/2 ton, 4 x 4, 2-DT

M Ea. 70

74 None

TRUCK, CARGO, BODY,
3/4 ton.

M " 30

JUSTIFICATION:

1. This requisition provides for a minimum of essential local and long distance telephone service restoration to ensure the early release of military communications equipment initially installed, and to relieve the communications problems for Civil Administration. The requirements listed provide for a minimum long distance service for Naples (where L.D. equipment and building were completely destroyed), and for minimum local and long distance service for Rome, and for other undesignated cities in Northern Italy covering needs for essential rehabilitation.

Distribution will be as follows:-

Items 1 to 6, inc. - for Naples
Items 7 to 24, inc. - for Rome
Items 25 to end - for Northern Italy.

2. This requisition has been made from requirements lists prepared by Communications Subcommittee, A.C.C., in collaboration with Signals A.F.H.Q.

locally available equipment has been taken into account.

long distance, 4-position, equipped for 20 ring-down long distance trunks, one switchboard with 10 junctions to the board covered by Item 56 and two switchboards each with 10 junctions to one of the boards covered by Item 57 (i.e., the third board under Item 57 will have no junctions to a toll board), each with relay sets, trunks to be multiplied on alternate positions.

71	"	<u>RINGING MACHINE,</u> 17 or 18 cycle, battery driven, for use with Item 70, to be driven off filament battery.	Ea.	4
72	"	<u>MAINTENANCE SET,</u> tools, for CD exchange,	St.	12
73	78-9329.2	<u>TRUCK, CARGO BODY,</u> 1-1/2 ton, 4 x 4, 2-DT	Ea.	70
74	None	<u>TRUCK, CARGO, BODY,</u> 3/4 ton.	"	30

JUSTIFICATION:

1. This requisition provides for a minimum of essential local and long distance telephone service restoration to ensure the early release of military communications equipment initially installed, and to relieve the communications problems for Civil Administration. The requirements listed provide for a minimum long distance service for Naples (where L.D. equipment and building were completely destroyed), and for minimum local and long distance service for Rome, and for other undersignated cities in Northern Italy covering needs for essential rehabilitation.

Distribution will be as follows:-

Items 1 to 6, inc. - for Naples
Items 7 to 24, inc. - for Rome
Items 25 to end - for Northern Italy.

2. This requisition has been made from requirements lists prepared by Communications Subcommission, A.C.C., in collaboration with Signals A.F.H.Q.

3. All locally available equipment has been taken into account. This requisition lists only those needs which must come from overseas sources.

4. Full consideration has been made for lack of destruction in Rome.

5. A.C.C. is with its present and prospective personnel prepared to:-
a. Train Italian Personnel.
b. Supervise Italian Personnel in the operation of this Communication equipment.

0333

CONFIDENTIAL

6. If this equipment is approved by CC/S normal sale procedure to the Italian Government will apply.

7. The following comments are made with reference to specific items on this requisition:-

Item 1 - This toll board will initially handle a very limited number of circuits entirely on a delayed basis. Recording of outgoing calls will be handled on a separate installation which is available locally. Also available locally is equipment to modify (as necessary) the circuits from the proposed toll board to the existing local network. The proposed toll board will be located in an existing repeater station at which a distribution frame and a 24-volt battery, with charging equipment, is available.

Items 14, 15 - It is anticipated that cable terminations and distributing frames for the small repeater stations can be supplied locally.

Item 16 - 20/500 ringers are specified because the normal ringing in Italy is 500 cycles. However, 20/1000 ringers may be substituted though these are less desirable because of flexibility.

Item 20 - "Bay" is British nomenclature. The American equivalent would be a distributing frame with 400 pairs protected, to terminate outside cables, plus connecting blocks as required for inside wiring to toll terminal equipment and to the toll switchboard. Sufficient silk and cotton tip cable, switchboard cable, and connecting blocks should be provided for the installation.

8. As a general condition, it would be preferable to supply like items of the same type and manufacture of equipment or the various installations for reasons of initial installation flexibility and for future maintenance. However, the supply of miscellaneous small items necessary for any required modification are available locally, so that the importance of common types of items is to be placed secondary to that of securing the large, major items in as short a time as possible.

9. Attempt has been made to describe items in a manner that will provide maximum flexibility in selecting and substituting materials to fill this requisition.

RATING: TWO

LANDED COSTS:- Information is requested with the manifests as to itemized costs & whether F.O.B. or C.I.F. If F.O.B. state approximate percentage to be added for freight.

Information Copies to:- The Directorate of Civil Affairs,
War Office, Whitehall,
London, S.W.1. (4 copies)
CG SOS Natoussa for SSGDS (4 copies)
N.Y.P.E. (4 copies)
G-4, AFHQ.
Signals, AFHQ.
Q(AE), AFHQ.
Ordnance, AFHQ.

Items 14, 15 - It is anticipated that cable terminations and distributing frames for the small repeater stations can be supplied locally.

Item 16 - 20/500 ringers are specified because the normal ringing in Italy is 500 cycles. However, 20/1000 ringers may be substituted though these are less desirable because of flexibility.

Item 20 - "Bay" is British nomenclature. The American equivalent would be a distributing frame with 400 pairs protected, to terminate outside cables, plus connecting blocks as required for inside wiring to toll terminal equipment and to the toll switchboard. Sufficient silk and cotton tip cable, switchboard cable, and connecting blocks should be provided for the installation.

8. As a general condition, it would be preferable to supply like items of the same type and manufacture of equipment or the various installations for reasons of initial installation flexibility and for future maintenance. However, the supply of miscellaneous small items necessary for any required modification are available locally, so that the importance of common types of items is to be placed secondary to that of securing the large, major items in as short a time as possible.

9. Attempt has been made to describe items in a manner that will provide maximum flexibility in selecting and substituting materials to fill this requisition.

RATING: TWO

LANDED COSTS:- Information is requested with the manifests as to itemized costs & whether F.O.B. or C.I.F. If F.O.B. state approximate percentage to be added for freight.

Information Copies to:- The Directorate of Civil Affairs,

War Office, Whitehall,

London, S.W.1. (4 copies)

CG SOS Natoussa for SSGDS (4 copies)

N.Y.P.E. (4 copies)

G-4, AFHQ.

Signals, AFHQ.

Q(AE), AFHQ.

Ordnance, AFHQ.

* Page 2, Item 13 refers; insert at * - "for use with SWITCHBOARD, TOLL TYPE, long distance, 10-position, equipped for 30 ring-down long distance trunks, complete with relay sets, trunks multiplied on alternate positions",

"THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENCE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT, U.S.C. 50; 31 AND 32. THE TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW".

HTWW/epc

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission

11th November, 1944

In reply
refer to: 4/23/ /CS

Subject : Civil Telecommunications Requirements.

To : C.S.O., L.of C.
Att: Major Tucker

1. A draft of a Memo. to be submitted to AFHQ is attached. Kindly confirm that para 3 (d) represents the true position.

2. Para 2 has been referred to C.S.O., A.A.I. for confirmation after a verbal reference to Major Jones, A.A.I.

Tel: 469081
Ext: 555

J.L.HENDERSON
Colonel
Director.

Incl: One draft

See 3 ATT
1928

File

HTWM/epc

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission

11th November, 1944

In reply
refer to: 4/23/ /CS

Subject : Civil Telecommunications Requirements.

To : C.S.O., Allied Armies in Italy.
Att: Major Jones

A draft of a memo. to be submitted to AFHQ is attached. Kindly say whether you agree with para. 2. The item referred to include repeaters (through and terminating), 500/20 or 1000/20 ringers, plate and anode batteries and engine-generator sets for charging batteries.

Tel: 489081
Ext: 555

J. L. HENDERSON
Colonel
Director

Incl: One draft

PT II

See

1947

File

HTWM/epc

DRAFT

In reply

refer to: 4/23/ /CS

Subject : Telecommunications Requirements - Reference Requisition
No. MGS - 124 - SIG.

To : AFHQ, G-5 (Economics and Supply Division)

Reference your S-19 of 18th October, 1944.

1. General:

Major items of the required equipment can be classed roughly as (a) line plant or (b) exchange plant. In each case, the demands shown on LAC Program 39 must now be altered due to a change in circumstances.

2. Line Plant:

(a) At the time of preparation of the requisition, it was the military intention to withdraw standard equipment as the Armies moved forward, replacements to be made from commercial equipment supplied via Allied Commission channels. Since non-military types of equipment were involved, it was reasonable for this HQ to prepare the necessary demands.

(b) Now that a supply of military standard line equipment for civil needs is contemplated it is obviously unnecessary to remove military equipment installed by A.A.I. HQ, since it would be substituted by identical equipment.

(c) The question now is therefore one of responsibility for the requisitioning of the line equipment required to replace in C.S.O., A.A.I.'s stores such items as are installed permanently by him for Italian use. As the C.S.O. has been supplied with a list

- 2 -

of minimum Italian circuit requirement, he is in a position to deal with the supply of line equipment for both military and civil needs.

(a) It is ~~found~~^{found} from C.S.O., A.A.I. that in fact his plans allow for the retention by the Italian Government of line equipment and associated power plant installed for civilian needs and that his demands for equipment make allowance for this.

Accordingly items 14, 15, 16, 17, 20, 21, 22, 23, 41, 42, 43, 44, 47, 48, 49, 50, 51, 52, 53, 54, on LAC Agram 39 may be deleted.

3. Exchange plant:

(a) It has been found in Rome that facilities exist for the manufacture of a limited quantity of switchboards.

(b) Several boards have been recovered from exchanges or found in stores depots.

(c) It is considered by C.S.O., L.of C. and by this HQ. that these boards can replace similar items on LAC Agram 39. This matter has been referred to you in a letter of 29th October from C.S.O., L. of C. which enclosed Memo. No.X/20/39 of 28th October.

(d) C.S.O., L.of C. has informed this HQ that the necessary frames, testers, ringing machines, batteries, and engine generator sets will be obtained by him for the operation of the switchboards, and that provision need not therefore be made for ¹⁰⁵ these items on requisitions from this HQ.

(e) Assuming your agreement with the proposals of C.S.O., L.of C. items 1, 2, 7, 13, 25, 26, 27, 28²⁹, 30, 31, 39, 40, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, and ^{and} 70¹, 71, may be deleted.

4. Items still required

(a) The ^{items} remaining on LAC Agram 39 are as follows:

- 3 -

Nos. 3, 4, 5, 6, 8, 9, 10, 11, 12, 18, 19, 24, 32, 33, 34, 35, 36, 37, 38, 45, 46, 46a, 55, 67, 68, 69, 72, 73, 74,

Of these, you refer in your LAC 706 to items 3, 5, 8, 9, 10, 11, 12, 24, 34, 35, 36, 37, 38, 55, 69, 72, and 73 as standard U.S. or U.K. equipment.

It only remains therefore to classify items 4, 6, 18, 19, 32, 33, 45, 46, 46a, 67, 68, and 74 in terms of standard items. This is done below.

(b) Items 4, 19, and 46a are standard U.K. items (TMSI)

(c) Items 6, and 74 are standard U.K. items (15 Cwt Truck)

(d) In place of items 18 and 45, there should be supplied (in addition to demands under other item nos.)

7 - Transmission measuring sets with V.F. Oscillator (see (b) above).

7 - Bridge Meggers.

(e) In place of items 32, 33, 67, and 68 there should be supplied:

96,480 ft. standard 20 pairs switchboard cable.

(f) Item 46 is a standard U.K. item.

5. Solder, Tin-lead: This is covered by items 10, 11, 36, and 37 listed in para 4 (a) above.

It has been found that no supplies of solder are held by Italians in liberated Italy. Tin is not obtainable for making solder. It is therefore desired that the above items be increased to the figures shown below.

Item 10 - 6000 lbs.

11 - 6000 "

37 - 6000 "

36 - 6000 "

J. HENDERSON
Colonel
Director, Communications Sub-Commission

CONFIDENTIAL

ALLIED FORCE HEADQUARTERS
G-5 Section
APO 512

Ref. S-19

11 November, 1944

SUBJECT: Telecommunication Equipment
Requisition MGS-184-SIG.

TO : Headquarters, Allied Commission, APO 394.

It is requested that a reply to our letter S-19
of 18 Oct be expedited. *check*

For the Assistant Chief of Staff, G-5:

R. V. Grady
R.V. GRADY
Captain, T.C.
Econ. & Supply Div.RECEIVED
13 NOV 1944
A. C.

1923

CROSS REFS.	
FILE CS/4/23	B/Fwd.

Date 15 NOV 1944

Director	
D. Director	
Chief, Telecom	<i>[initials]</i>
Chief, Postal	
H. Q. Com.	<i>[initials]</i>
Asst. Chief Postal	
Censorship	
Chief Clerk	

CONFIDENTIAL

309/
Communications

S/C

667

67

Relieve to me on 18 Nov.
H. Q.
1944

CONFIDENTIAL

ALLIED FORCE HEADQUARTERS
G-5 Section
APO 512

Ref. S-19

11 November, 1944

SUBJECT: Telecommunication Equipment
Requisition MGS-184-SIG.

TO : Headquarters, Allied Commission, APO 394.

It is requested that a reply to our letter S-19
of 18 Oct be expedited.

For the Assistant Chief of Staff, G-5:

R.V. GRADY
Captain, T.C.
Econ. & Supply Div.

1922

CONFIDENTIAL

ALLIED FORCE HEADQUARTERS
G-5 Section
APO 512

11 November, 1944

Ref. S-19

SUBJECT: Telecommunication Equipment
Requisition MGS-184-SIG.

TO : Headquarters, Allied Commission, APO 394.

It is requested that a reply to our letter S-19
of 18 Oct be expedited.

For the Assistant Chief of Staff, G-5:

R.V. GRADY
Captain, T.C.
Econ. & Supply Div.

1941

TRANSLATION BY SELAN.

REF. 29050/5 - 4

TO;
ALLIED COMM ISSION
POSTS AND TELECOMMUNICATIONS SUB-COMMISSION
APO 394

SUBJECT. : Arrangement of inter-urban desks taken from
the Florence inter -urban exchange.

Reference is made to your letter CS/4/23/65 dated November
7th.

We herew-ith enclose the report on the meeting
which took place on November 9th, between the State Agency
for the Telephone Services and the Face.

From the above report it appears clear what
is to be done, and the proposals made, in order to satisfy
the requests addressed by Major Tucker to Ing. Biffis, of
the Face.

If you approve the proposals of the enclosed
report, we beg you to:

- 1) - Grant authorisation to the State Agency
for the Telephone Services.
- 2) - Entrust the Teti with the work, specified
in para 1 of the work programme (see herewith report)

THE UNDER SECRETARY OF STATE FOR
POSTS AND TELECOMMUNICATIONS.

For	
For	
Secms	
Chief	
Chief	
Chief Post	
Censorship	
Chief Clerk	

CROSS	
REFS.	
FILE	
CS/4/23	

Date 11/11/44

66

65

rec: 9. part III

1944

REPORT

on, the meeting hold in Rome on 9th November 1944 in the premises of the Directions of the State Agency for the Telephone Services, about the arrangement of the Florence inter-urban desks.

Ing. Montironi, of the State Agency for the Telephone Services, and Ing. Biffis, of the Face, examined the possibility of satisfying the requests, addressed to the face by Major Tucker (C.S.O. I. of C. Italy) on 2nd November.

A) - Inter-urban telephone exchanges for military service.
8 positions, like those forecasted for Bologna (Genoa)
6 positions with 3/4 Bologna equipment, that is with 60 inter-urban lines (Venezia)

B) - Inter-urban telephone exchanges for civil service.
4 positions for Bologna (equipments as the State prefers)
2 positions for Florence (as existing)
2 positions for Trieste (equipments as the State prefers)
4 positions for Venezia (equipments as the State prefers)

Ing. Biffis reports the result of the supervisions carried out on the several parts of the State inter-urban exchanges (old type) and new type arrived from Florence. From the memos of Ing. Biffis it is understood that the material fit to be used again, arrived from Florence, is not enough for satisfying completely the required supply.

10-9

On the other hand, the desks not occupied by the swithhing service of the Rome State exchange cannot be quickly made use of again, because their equipments are actually used for the Allied military service. It would be necessary to supply the positions actually working with suitable relays frameworks, comprehending all the relays on the lines, which would have to substitute the other ones, now distributed at the positions, which could be released for other work.

On the other side, the Agency forwards for attention

the possibility of making use of an old Siemens inter-urban exchange, property of the Teti, as reserve for their exchanges.

That is now available. Given the above, it is proposed the following:

A) - Military needs:

1) - For Genoa: 8 positions with equipment as Bologna, which could be taken from 8 of the new positions lately arrived from Florence.

2) - For Venezia: use of the Siemens old exchange, property of the Teti.

B) - ^{Civilian?} Military needs, making use partially of the old desks.

1) - For Bologna: 4 positions with equipment as follows:

- 16 inter-urban lines.
- 20 lines with central battery.
- 10 lines going into the urban exchange
- 20 lines coming out from the urban exchange.

2) - For Trieste: 2 positions with equipment as follows:

- 2 inter-urban lines.
- 10 lines with central battery
- 10 lines going into the urban exchange
- 10 lines coming out from the urban exchange.

3) - For Venezia: 4 positions with equipment as for Bologna.

C) - Civil needs, using the new desks.

For Florence: 2 positions, equipped like the working ones.

WORK PROGRAMME.

1948

1) - The Teti should be invited to fit the old Siemens exchange (reference as above) to the needs of the service, requested by the Allied Command.

2) - It is forecasted that the Face will be able to commit:

The exchange for ~~the~~ the military service for Genoa within January 1945.

The exchange for the Bologna civilian service within December 1944;

The exchanges for the Venezia and Trieste civil service within February 1945.

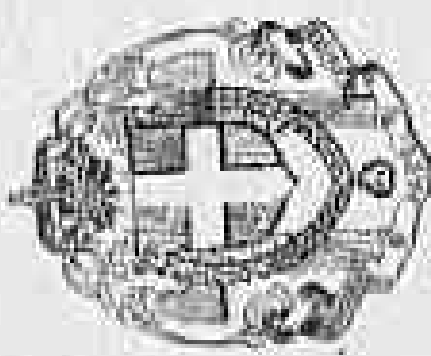
The carrying c t of such work is dependant
on the possibility of finding all the missing
stores.

The Agency from their side have promised
to supply the Face with the necessary collaboration
concerning personnel, material and workshop's work

FACE

STATE AGENCY FOR THE TELEPHONE
SERVICES.

Mod. 9 (A.T.)



Ministero delle Comunicazioni

AZIENDA DI STATO PER I SERVIZI TELEFONICI

2° UFFICIO 1°

REPARTO

Prot. N. 29050/510-4 Allegato 1

19 A

Ricevuto

Risposta al N. 2

del

OGGETTO Sistemazione tavoli interurbani prelevati dalla centrale interurbana di Firenze.

Con riferimento alla nota di codesta Sottocommissione N. CS/4/23/65 del 7 novembre u.s. si trasmette il verbale della riunione tenuta il giorno 2 corrente mese fra l'Azienda di Stato per i Servizi Telefonici e la Face da cui risultano le possibilità e le proposte per soddisfare quanto richiesto dal Maggiore Tucker direttamente all'ing. Biffis della Face.

Se codesta Cn. Commissione approva le proposte dell'unito

verbale, si prega:

- 1) darne benestare all'Azienda di Stato per i Servizi Telefonici;
- 2) interessare la Teti per i lavori di sua competenza specificati al punto I del programma di lavoro di cui al verbale allegato.

 19.6
 IL SOTTOSCRITTO DI STATO

 ALLA COMMISSIONE ALLEGATA
 SOTTOCOMMISSIONE COMUNICAZIONI

17

V E R B A L E

della riunione tenutasi in Roma il 9 novembre 1944 nei locali della Direzione dell'Azienda di Stato per i Servizi Telefonici in merito alla sistemazione dei tavoli interurbani di Firenze.

=====

L'ing. Montironi per l'Azienda di Stato per i Servizi Telefonici e l'ing. Biffis per la Facc hanno esaminato le possibilità di soddisfare le richieste fatte alla Facc del Maggiore Tucker (C.S.O. L. of C. Italy) in data 2 novembre u.s. e che si possono così riassumere:

A) Centrali telefoniche interurbane per servizio militare

8 posizioni come quelle previste per Bologna (Genova)

6 posizioni con equipaggiamento 3/4 Bologna cioè con 60 linee interurbane (Venezia).

B) Centrali telefoniche interurbane per servizio civile

4 posizioni per Bologna (equipaggiate come vuole lo Stato)

2 posizioni per Firenze (come esiste)

2 posizioni per Trieste (equipaggiate come vuole lo Stato)

4 posizioni per Venezia (equipaggiate come vuole lo Stato).

L'ing. Biffis riferisce sui risultati delle verifiche eseguite sui vari organi delle tavole interurbane statali vecchio tipo e nuovo tipo provenienti da Firenze. Dalla relazione dell'ing. Biffis risulta che il materiale riutilizzabile proveniente da Firenze non è sufficiente per soddisfare intieramente il richiesto fabbisogno.

D'altra parte i tavoli liberi dal servizio di commutazione della centrale statale di Roma non possono essere senz'altro utilizzati, in quanto i loro equipaggiamenti sono impegnati per l'attuale servizio militare alleato; per far ciò sarebbe necessario provvedere i posti attualmente attivi di apposito telaio relais, comprendenti tutti i relais di linea che dovrebbero sostituire quelli ora distribuiti sui singoli posti di lavoro da disimpegnare per altre destinazioni.

L'Azienda prospetta invece una nuova possibilità mediante l'impiego di una vecchia centrale interurbana Siemens di proprietà della Società Telefonica Tirrena già utilizzata dallo Stato come riserva delle proprie centrali attualmente disponibili.

=====

L'ing. Montironi per l'Azienda di Stato per i Servizi Telefonici e l'ing. Biffis per la Face hanno esaminato le possibilità di soddisfare le richieste fatte alla Face dal Maggiore Tucker (C.S.O. I. of C. Italy) in data 2 novembre u.s. e che si possono così riassumere:

A) Centrali telefoniche interurbane per servizio militare

- 8 posizioni come quelle previste per Bologna (Genova)
- 6 posizioni con equipaggiamento 3/4 Bologna cioè con 60 linee interurbane (Venezia).

B) Centrali telefoniche interurbane per servizio civile

- 4 posizioni per Bologna (equipaggiate come vuole lo Stato)
- 2 posizioni per Firenze (come esiste)
- 2 posizioni per Trieste (equipaggiate come vuole lo Stato)
- 4 posizioni per Venezia (equipaggiate come vuole lo Stato).

L'ing. Biffis riferisce sui risultati delle verifiche eseguite sui vari organi delle tavole interurbane statali vecchio tipo e nuovo tipo provenienti da Firenze. Dalla relazione dell'ing. Biffis risulta che il materiale riutilizzabile proveniente da Firenze non è sufficiente per soddisfare intieramente il richiesto fabbisogno.

D'altra parte i tavoli liberi dal servizio di commutazione della centrale statale di Roma non possono essere senz'altro utilizzati, in quanto i loro equipaggiamenti sono integrati per l'attuale servizio militare. Allecto; per far ciò sarebbe necessario provvedere i posti attualmente attivi di apposito telaio relais, comprendenti tutti i relais di linea che dovrebbero sostituire quelli ora distribuiti sui singoli posti di lavoro da disimpegnare per altre destinazioni.

L'Azienda prospetta invece una nuova possibilità mediante l'impiego di una vecchia centrale interurbana Siemens di proprietà della Società Telefonica Tirrena già utilizzata dallo Stato come riserva delle proprie centrali ed attualmente disponibile.

Ciò premesso si propone quanto segue:

A) Esigenze militari

- 1) Per Genova: 8 posizioni con equipaggiamento come Bologna da ricavare da 8 delle nuove posizioni provenienti da Firenze.

2) Per Venezia: impiego della vecchia centrale Siemens della Teti.

B) Esigenze civili con impiego di parte dei tavoli vecchi:

1) Per Bologna: 4 posizioni con equipaggiamento massimo come segue:

16 linee interurbane

20 linee a batteria centrale

10 linee entranti dall'urbana

20 linee uscenti dall'urbana.

2) Per Trieste: 2 posizioni con equipaggiamento massimo come segue:

8 linee interurbane

10 linee a batteria centrale

10 linee entranti dall'urbana

10 linee uscenti dall'urbana.

3) Per Venezia: 4 posizioni con equipaggiamento massimo come segue:
per Bologna.

C) Esigenze civili con impiego di tavoli nuovi:

Per Firenze: 2 posizioni equipaggiate come quelle già attive.

PROGRAMMA DI LAVORO

I - La Teti dovrebbe essere invitata ad adattare la vecchia centrale Siemens di cui sopra alle esigenze del servizio richiesto dal Comando Alleato.

II - Si prevede che la Tace possa consegnare: la centrale per servizio militare per Genova entro Gennaio 1945;
la centrale per servizio civile per Bologna entro dicembre 1944;
le centrali per servizio civile per Venezia e Trieste entro febbraio 1945.

L'attuazione di questo programma è necessariamente subordinata alla possibilità di trovare tutto il materiale mancante.

L'Azienda dal canto suo s'impegna a dare alla Tace tutta la necessaria collaborazione sia di personale, sia di materiale, sia di lavoro di officina.

2) Per Trieste: 2 posizioni con equipaggiamento massimo come segue:

- 10 linee entranti dall'urbana
- 20 linee uscenti dall'urbana.
- 8 linee interurbane
- 10 linee a batteria centrale
- 10 linee entranti dall'urbana
- 10 linee uscenti dall'urbana.

3) Per Venezia: 4 posizioni con equipaggiamento massimo come
per Bologna.

c) Esigenze civili con impiego di tavoli nuovi:

Per Firenze: 2 posizioni equipaggiate come quelle già attive.

PROGRAMMA DI LAVORO

I - La Teti dovrebbe essere invitata ad adattare la vecchia centrale Siemens di cui sopra alle esigenze del servizio richiesto dal Comando Alleato.

II - Si prevede che la Face possa consegnare: la centrale per servizio militare per Genova entro Gennaio 1945; la centrale per servizio civile per Bologna entro dicembre 1944; le centrali per servizio civile per Venezia e Trieste entro febbraio 1945.

L'attuazione di questo programma è necessariamente subordinata alla possibilità di trovare tutto il materiale mancante.

L'Azienda dal canto suo s'impegna a dare alla Face tutta la necessaria collaborazione sia di personale, sia di materiale, sia di lavoro di officina.

PER LA FACE.

B. ffr

PER L'AZIENDA DI STATO PER I
SERVIZI TELEFONICI

J. Luvico Portinari

0352

HRS/epc

(65)

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission

7th November, 1944

In reply
refer to: 65/4/23/65

Subject : Inter-Urban Toll Boards Ex-Florence.

To : H.E. The Under-Secretary of State for F.F.T.

1. Reference is made to your letter of November 4th, 1944, S/150/3512.

2. To meet future requirements 26 positions of Toll Board will be required.

3. Whether this is accomplished by rehabilitation of Boards Ex-Florence or by removing positions from Rome Toll office, for example, is a question for the Azienda and F.A.C.E. to decide.

4. Ing. Biffis of the F.A.C.E. has been so informed and has received from Major Tucker full instructions as to how Boards are to be equipped.

Telephone 489081
Ext: 333

J. B. HENNINGSON
Colonel
Director

Copy to: C.B.O., L. of G. Italy
Att: Major Tucker
F.A.C.E.
Via Emilia 26, Roma.

in: 91943 III

File

Translation by Selan.

4th November 44. (64)

Ref. S/150/3512

In reply to: CS/4/23 dated 29/10/44.

Subject : Inter-urban positions - Florence.

1. Reference is made to the abovementioned letter.
2. According to my instructions, to day the work program has been examined by the State Agency for the Telephone Services, together with Ing. Biffis, belonging to the FACE, for the reactivation of 26 positions of the Florence inter-urban exchange.
3. It is understood that only 4 of the 12 new positions will be able to be restored, but it is hoped that two others will be reactivated.
4. With regard to the other 14 positions, no precise information has yet been communicated by the FACE. They will do that by Thursday, 7th November 1944.
5. In this instance the actions concerning the effective co-operation of the technical personnel of the Agency with the FACE one, for the quick carrying out of the work will be examined and decided.
6. I will inform you of the definitive result in due course.

Director _____
 Director _____
 Dir. Telecoms _____
 Dir. Postal _____
 Dir. Coms. O. _____
 Dir. Chief Postal _____
 Dir. _____
 Dir. Clerk _____

The Under Secretary of State for PP.TT.
1942

CROSS REFS.	
FILE CS/4/23	B/Fwd.

Date 7 NOV 1944



MINISTERO DELLE COMUNICAZIONI

SOTTOSEGRETARIATO DI STATO
ALLE POSTE E TELECOMUNICAZIONI

SEGRETERIA

N° 5/15.0/3512

Risposta al N. CS/4/23 del 29.X.944

6 4 Novembre 1944

Alla

COMMISSIONE ALLEATA

Sottocommissione Poste e Telecom-
unicazioni

R O M A

OGGETTO: Posti di lavoro interurbano
ex Firenze

- 1° - Si fa riferimento alla lettera sopracitata .
- 2° - In conformità alle direttive dello scrivente stamani è stato esaminato presso l'Azienda di Stato per i Servizi Telefonici con l'Ing. Biffis della F.A.C.E il programma di lavoro per il riassetto dei 26 posti dell'interurbana di Firenze .
- 3° - E' risultato che dei 12 posti nuovi, soltanto 4 potranno essere sicuramente riattati : tuttavia si spera di riuscire a riattarne anche altri due .
- 4° - Circa gli altri 14 posti la F.A.C.E non è stata ancora in grado di precisare le possibilità . Si è riservata di farlo entro martedì prossimo 7 corr.
- 5° - In quella occasione saranno anche esaminate e decise le modalità per il concorso effettivo del personale tecnico dell'Azienda in collaborazione a quello della F.A.C.E per la più sollecita esecuzione dei lavori .
- 6° - Sarà cura dello scrivente comunicare a codesta Sottocommissione le conclusioni definitive .

IL SOTTOSEGRETARIO DI STATO

1911

HHS/epc
163

HEADQUARTERS
ALLIED COMMISSION
C.I.F.

29th October, 1944

In reply
refer to: GS/4/23/

Subject : Rehabilitation of Toll Boards.

To : H.E. The Under-Secretary of State for PP.TT.

1. Reference is made to our letter GS/4/23/52 dated 10th October, 1944, covering rehabilitation of 26 positions of State toll Board returned from Florence to Rome.
2. It would be appreciated if a delivery schedule for these Boards were communicated to this Sub-Commission as soon as possible as well as equipment specifications showing facilities and capacity.
3. Every indication points to an acute shortage of Toll Boards and it may be necessary to remove some sections of the Rome Toll Board or at least utilise equipment from the Rome Toll Board to rehabilitate all the 26 positions returned from Florence.

J.L.HENDERSON
Colonel
Director, Communications Sub-Commission

Copy to: P.A.C.E.
Via Emilia 86,
Rome.

1910

File

0358

HTM/epc

(62)

HEADQUARTERS
ALLIED COMMISSION
C.E.F.

23th October, 1944

In reply
refer to: CS/4/23/

Subject : V.F. Telegraphs.

To : The Under-Secretary of State for PP.TT.

1. With reference to your letter No. 8/15.1/5326 of 27th October, the programme has been explained in writing to C.S.O., A.A.I. and C.S.O., L.of C. with the necessary diagrams.

2. A programme of installation work has also been sent (copy attached) and perhaps you could say when it will be possible for you to commence work on item 2, after allowing for the staff required for the 3 channel installation at Firenze (not yet authorised but expected shortly).

3. It is expected that the 9 and 11 channel equipment will be in Naples shortly.

Hon
✓ J.L. HENDERSON
Colonel

Director, Communications Sub-Commission

1309

File

CONFIDENTIAL

SUBJECT: State Switchboards from FLORENCE

LIN HQ. AAI.

TEL: FILPOT 357

TO : Communications Sub-Commission A.C.C.
ATTENTION: Lt. Col. Scudder.

X/20/21

13 October 1944.

1. Confirming arrangements made verbally the twelve positions of "new" Standard type L. D. switchboard and the seven positions (sections?) "old" Standard type switchboard pertaining to the Azienda dell' Stato in FLORENCE have been shipped to ROME for repair by the manufacturer, FACE, at the expense of the State.

2. At the moment there is no plan to use these boards for military purposes; the work of rehabilitating them to the State specifications may proceed, and the State may plan on using these boards wherever it may decide. However, it is understood that if the need for these boards arises, they will be appropriated for military purposes.

(a) Request that this office be advised:

- (i) Of the equipment which the State proposes for these boards.
- (ii) When the boards are ready for service.
- (iii) Before shipping the boards to any new location.

Lyman B. Tucker

LYMAN B. TUCKER,
Major Sig. Corps
for Brigadier,
C.S.O. L. of C. ITALY

LBT:IE

DISTRIBUTION: C.S.O. L. of C. ITALY, South, Eng. Br.

1908

RESTRICTEDMAI HQ. AAL.TEL: FILPOT 357X/20/2313 October 1944.

SUBJECT: Military Use of 8 Positions "Standard"
Switchboard from LECHORN Belonging to TETI.

TO : Communications Sub-Commission, A.C.C.
ATTENTION: Lt. Col. Scudder

1. Confirming conversations Lt. Col. Scudder, Maj. Tucker and "TETI" the 8 positions plus one supervisory position of "Standard" type switchboard, formerly at LECHORN and now at the "TETI" warehouse in FLORENCE belonging to "TETI" are being taken over and will be modified and amplified for military use.

(a) The modified board will be held in reserve for use further north, when and if needed, probably at BOLOGNA. It is planned to hold the modified board at FLORENCE until such time as it is required. If not required for military use the board will be returned to the civilians. The military modification is essentially an amplification in the equipment and is being carried out in such a manner as to permit the board to be most easily reconverted to civilian use.

2. Arrangements for the work of modification and amplification of the board have been made with FACE, the firm which manufactured the board. Copy of the letter ordering the work done by FACE, our file number X/36 of 12 October 1944, has been sent to you. It will be necessary for FACE to obtain certain additional equipment from "TETI", Azienda dell' Stato and other sources, and in obtaining this equipment FACE will be acting as agents for the military, and will be treated accordingly by those concerned. Remuneration to FACE for the work done will be made through military channels.

3. Inasmuch as, if used, the board will pass out from "TETI" territory, you are requested to make suitable arrangements as to property ownership. Any arrangements which will not hinder the military use of the board would be satisfactory. If the board is to be requisitioned then this could be done at the time when the need for the board is an actuality.

Lyman B. Tucker

LYMAN B. TUCKER,
Maj. Sig. Corps.
for Brigadier,
C.S.O. L. of C. ITALY 1907

LBT:IE

DISTRIBUTION: C.S.O. L. OF C. ITALY, SOUTH, ATT: ENG. BR.
Adv. Telecoms Board.
Telecoms A.C.C. (FLORENCE) Att: Maj. Ayre
Stores Branch.

SUBJECT: Modification and Amplification of 8
Positions of "Standard" Switchboard

TO : FACE,
66 Via d'Enlie, ROME

RESTRICTED

MAIL NO. 221

TEL: FILPOT 357

X/ 36

12 October 1944.

1. In accordance with the verbal indications and instructions given by Major L. E. Tucker to Eng. Biffis you are authorized to proceed with the following modification and amplification on the 8 positions plus one supervisory position of "Standard" type switchboard belonging to "TETI", formerly installed at LEONORD and now held at the "TETI" warehouse in FLORENCE:

- 30 outgoing to automatic Trunks (existing)
- 80 manual ring down (L.D.) Trunks (an increase of 40)
- 30 Common Battery Bothway junctions (some of these can be used for recording Trunks)
- 30 incoming Trunks from automatic (to be arranged for direct connection to any type of L.D. line)
- 40 Common Battery Bothway junctions (to give through signalling facilities with local manual exchanges.)

2. FACE will be responsible for the entire work, and will obtain from "TETI", Azienda dell'Estado, or other sources the necessary relays, jack strips, other equipment and materials to bring the board to the above specifications. FACE will keep an accurate record of all equipment and major materials used, together with the source, which are not furnished by FACE. Receipts will be given by FACE for this equipment and materials, and copies of the receipts will be submitted with the FACE invoice.

- (a) The above includes the 8 plus 1 positions; FACE will make an inventory of the equipment on the positions as actually taken over and submit as above.

3. All circuits shown above will be multiplied over each two positions. FACE will make the multiple.

4. The switchboards are fully equipped with cord circuits and most of the jack strips. FACE is responsible for testing out all existing equipment and making sure it operates properly.

1906

- 2 -

5. This work is of military necessity and is urgent. Upon completion FACE will submit invoices based upon the work done and materials furnished by FACE to C.S.O. L. of C. ITALY.

Lyman B. Tucker.

LYMAN B. TUCKER,
Maj. Sig. Corps.
for Brigadier,
C.S.O. L. OF C. ITALY

LETT:IE

DISTRIBUTION: C.S.O. L. of C. ITALY, South, Att. Eng. Br.
- Communications Sub-Commission A.C.C. Att. Lt. Col. Sender ✓
Adv. Telecoms Board
Telecoms A.C.C. (FLORENCE) Attn. Maj. Ayre
Stores Branch.

1965

0361
SECRETALLIED FORCE HEADQUARTERS
G-5 Section
APO 512

JEB/RVG/wss

Ref. S-19

SUBJECT: Telecommunication Equipment.
Reference Requisition No. MGS-184-SIG.TO : Headquarters, Allied Control Commission, APO 394
(Attn: Director Communications Sub-Commission)

REFERENCE: Your Signal 4864 of 14 October.

1. Attached please find Signals CAL 662 and 867 and LAC 706 pertaining to MGS-184-SIG (LAC Airgram 39).

2. It is indicated from this exchange of communications that:

- a. Non-standard equipment will not be readily available.
- b. Standard equipment could probably be supplied without undue delay.
- c. On the basis of the present requisition the Army supply services are unwilling to release standard equipment without assurance that the requisite commercial equipment will also be provided.

It is strongly recommended:

- a. That you review your requirements in LAC Airgram 39, substituting standard equipment in so far as possible for commercial equipment.
- b. That you resubmit your requirements for commercial equipment, indicating why military equipment cannot be utilized as a substitute.

4. Upon receipt of information requested in para 3 above this Section will upon concurrence of G-4, AFHQ, requisition standard equipment through normal military channels and forward

-1-

SECRET

CROSS	58
FILE	B/fwd.
CS/4/23	

Date 22/10/44

SECRET

your requirements for commercial equipment to CCAC for reconsideration.

For the Assistant Chief of Staff, G-5:

J. E. Butterworth
J. E. BUTTERWORTH,
Colonel, Infantry,
Economics & Supply Division.

Incls:
as above.

Director	
D. Director	
Chief, Telecoms	
Chief, Postal	
H. Q. Coms.	
Asst. Chief Postal	
Censorship	
Chief Clerk	

1963

SECRET

0363

SECRET

ROUTINE

WAR
NR 406
FILED: 112223Z

AFSC N278/12
120358
ogr

FROM: ACWAR FROM COS

TO : WILSON INFO STAFF AND CG ESCUSA FOR BRITISH CHIEFS
OF STAFF

Paraphrase

REF NO THIS MESSAGE: NZ79300

11 August 1944

CAL 662

For SHCE

For PHCEC

Cite CCAC

Refer Cal 617.

Telecommunication equipment.

Items requested in Iac Airgram 39 are approved as civilian supply requirements to the extent the items are standard US or UK Army items. Further reference to our parallel cable relative to industrial first aid and automotive spares, Cal 663.

Procedure proposed for meeting requirements of telecommunications stores is:

- A. Items already installed and which now should remain as essential civilian supplies: Civil Affairs Staff will notify US or British Army Service responsible for original issue that items concerned are to be used as essential civilian supplies. The service responsible will then record the items as transferred to Civil Affairs and furnish issue vouchers endorsed "For Essential Civilian Supplies."
- B. Items yet to be installed as essential civilian supplies will be referred to Theater Commander for decision as to which items are to be supplied through US Army and which through British Army channels. Services in the respective armies will then issue such items as are available from their respective Theater stocks, endorsing relative issue vouchers "For essential Civilian Supplies". Items which are not available from Theater stocks and those which though available need to be replaced will be requisitioned by the respective army services through normal channels as for normal operational requirements.

No further action will be taken by CCAC on this requisition, pending your comments on the above procedure. If you are unable to meet the requirements stated by you and approved herein under the above procedure, as outlined, or as modified, by your suggestions, using only standard army items you should place a new requisition on CCAC for such specific non-military items, giving complete justification, location in which required and essentiality rating.

NOTE: CAL 617 REF WX 70468 MC IN 15670 26/7/44
CAL 663 NOT IDENTIFIED IN AFHQ MC FILES.

G-5

SECRET

SECRET

AFHQ MESSAGE CENTER

INCOMING MESSAGE

WARZ
NR224/13
FILED: 182031Z

AFSC N192/19
190225A
mib

ROUTINE



FROM: AGWAR FROM CCS

TO: AFHQ TO WILSON INFORMATION UK BASE SECTION FOR BCS,
COMMUNICATION ZONE, AND SHARE

REF NO THIS MESSAGE: WX48447 18 October 1944

For FHGEG.

For SHGE.

Cite CCAC.

CAL 867.

This is a personal message from Lieutenant Colonel
LEVER for Colonel BUTTERTON.

Reference is LAC Airgram 39, CAL 662 and LAC 706.

It is stated here that if standard Army items are
acceptable in lieu of requested commercial types as in-
dicated in LAC 706 the procurement of all items can pro-
ceed as outlined in CAL 662. Thus, the program could be
expedited subject to such changes as would be imposed
through receipt of all standard Army items. The alternative
involving commercial types would be a delay of 10 months
due to inavailability of commercial equipment.

Would urge acceptance of all military type equipment.
If such is acceptable reasonably prompt delivery can be
made under procedure CCAC (S) 8/6. Suggest that acceptable
military items be requisitioned at once.

NOTE: CAL 662 is ref WX-79300 MC IN 7082 12-8-44 G-5
LAC 706 is ref FX-28165 MC OUT 5631 27-9-44 G-5

ACTION: 2-5

INFORMATION: SCS G-4 **SECRET** M&TN C/S NATO
HQ CZ SIGNALS Q(AE) RECORDS COPY NO. 1

THE MAKING OF AN EXACT COPY OF THIS MESSAGE IS FORBIDDEN
MC IN 13880 19 Oct 44 0735A REF NO: WX-48447 b/K/K

AFHQ
MESSAGE CENTER
OUTGOING MESSAGE

ROUTINE

TO FOR ACTION : AGWAR FOR COS FOR CCAC AND FOR LEVIS
 FOR INFO : CENTRAL DISTRICT UK BASE SECTION LONDON
 SHAEE FOR SMGE, HQ COM ZONE ETCUSA
 REF NO : FX 28165
 SIGNED : WILSON CITE: FHGEG, FHGDS

This is LAC 706.

Telecommunication Equipment. Refer CAL 562 and LAC airgram 39.

1. Procurement procedure for items of standard military equipment is agreed.

2. It is strongly recommended that the required commercial type equipment be approved for shipment into the Theatre on a basis of non military responsibility. The supply of all items is essential to the establishment of minimum telecommunication facilities. In interest of time economy it is urged that procurement action for non standard equipment be initiated on basis of LAC airgram 39.

3. Following items are standard US or UK Army equipment and will be requisitioned through normal Army service channels upon notification that procurement of non military items has been approved:

3, 5, 8, 9, 10, 11, 12, 23, 24, 34, 35, 36, 37, 38, 54, 55, 69, 72, 73.

No military equipment is available against requisition except upon immediate replacement. Items 1 thru 24, less deletions, are for NAPLES, ROME and 2 intermediate repeater stations to supplement existing civil equipment and permit removal of military temporary substitutes required elsewhere.

It is requested that the following items be deleted from LAC airgram 39 due to recent installations of

MC OUT 5631

- 1 -

CONFIDENTIAL

3

~~U.S. CONFIDENTIAL - EYES ONLY - BRITISH~~

COPY No.

THE MAKING OF AN EXACT COPY OF THIS MESSAGE IS FORBIDDEN

civil equipment: 12, 13, 14, 15, 16 and 20.

ORIGINATOR : G 5 AUTH: N P SEAGRAVE, MAJOR
 INFORMATION: G-4 CONCUR: G-4
 QM
 M & TN
 C/S NATO
 SIGNALS
 SOS NATO
 Q(AE)
 ORD
 AG RECORDS

MO OUT 5631 21 Sept 44 1455A REF NO: FX 28163 v/D/WH

CONFIDENTIAL

HEADQUARTERS
ALLIED CONTROL COMMISSION
Requisition Division
APO 394

RED/ln

In reply
refer to:
RD - 413.4

3 July 1944

SUBJECT: Communications for Essential Civilian Purposes.

TO : Director, Communications Sub-Commission, A.C.C.

1. Reference is made to requisition No. 1-SIG-Region-IV 44 of 30 May 44 for telephonic equipment for essential civilian purposes in Northern Italy.

2. This requisition has been approved by co-ordinating agencies of AFHQ and forwarded to CCAC, Washington, for action. AFHQ requisition No. MGS-184-SIG covers this action.

3. You will be advised of further action taken in connection with the procurement and shipment of items on this requisition.

For the Chief, Requisition Division:

Robert A. Martino
ROBERT A. MARTINO, *REO*
Lt. Col. Spec. Res.,
Division Executive.

Encl: Reqn. MGS-184-SIG.

*Int Planning
file*

1899

CS/4/23.

CONFIDENTIAL

CONFIDENTIAL

CONFIDENTIAL

ALLIED FORCE HEADQUARTERS

LAC AIRGRAM 39, 29 June 1944.

From : FHGEG
To : CCS, for CCAC (4 copies)
Subject: Requisition Number MGS-184-SIG.

Ship to: NAPLES consigned to Communications Subcommittee, A.C.C., with delivery as follows:-
Items 1 to 24, inc. - immediate shipment.
Items 25 to end - required roughly in order as shown, as soon as possible after 1 July.
(The Serial No. of each consignment must include the letters TCG. Packages must be marked with standard approved markings of green dots on crossed white tape).

The following items are requested for allocation in relation to their availability and the CCAC's appraisal of the justification. The quantities requested give effect to screening by this headquarters.

If allocation is approved it is requested that procurement be initiated and this headquarters advised so that normal supply procedure may be effected.

Item No.	Stock No.	Article	Unit	Required
1	None	SWITCH BOARD, TOLL TYPE, long distance, 8 position, equipped for 30 ring-down long distance trunks, complete with relay sets; trunks being multiplied on alternate positions; in addition to trunk multiple, four appearances of 20 each jacks and lamps without associated relay equipment.	Ea.	1
2	"	RINGING MACHINE, 17 or 20 cycle, mains driven, to operate on 150 volts at 45 cycles, for use with item 1. (no other power plant required for item 1).	"	1
3	"	BRIDGE MEGGER, (or Wheatstone bridge and insulation megger) for battery operation.	"	1898 1
4	"	TRANSMISSION MEASURING SETS, portable, with V.F. oscillators.	"	2

with delivery, as follows:

- Items 1 to 24, inc. - immediate shipment.
- Items 25 to end - required roughly in order as shown, as soon as possible after 1 July.

(The Serial No. of each consignment must include the letters TOG. Packages must be marked with standard approved markings of green dots on crossed white tape).

The following items are requested for allocation in relation to their availability and the CCAC's appraisal of the justification. The quantities requested give effect to screening by this headquarters.

If allocation is approved it is requested that procurement be initiated and this headquarters advised so that normal supply procedure may be effected.

<u>Item No.</u>	<u>Stock No.</u>	<u>Article</u>	<u>Unit</u>	<u>Required</u>
1	None	<u>SWITCH BOARD, TOLL TYPE,</u> long distance, 8 position, equipped for 30 ring-down long distance trunks, complete with relay sets; trunks being multiplied on alternate positions; in addition to trunk multiple, four appearances of 20 each-jacks and lamps without associated relay equipment.	Ea.	1
2	"	<u>RINGING MACHINE,</u> 17 or 20 cycle, mains driven, to operate on 150 volts at 45 cycles, for use with item 1. (no other power plant required for item 1).	"	1
3	"	<u>BRIDGE MEGGER,</u> (or Wheatstone bridge and insulation megger) for battery operation.	1898	1
4	"	<u>TRANSMISSION MEASURING SETS,</u> portable, with V.F. oscillators.	"	2
5	78-9329.2	<u>TRUCK, CARGO. BODY,</u> 1-1/2 ton, 4 x 4, 2-DT.	"	30
6	None	<u>TRUCK, CARGO. BODY,</u> 3/4 ton.	"	20
7	"	<u>TEST DESK or TEST CASE,</u> with equipment, including spare voltmeter.	"	1
8	"	<u>BRIDGE MEGGER,</u> (or Wheatstone bridge and insulation megger), for battery operation.	"	1

CONFIDENTIAL

Item Stock
CONFIDENTIAL

		Article	Unit	Required
9	None	MAINTENANCE SET, tools, for CB exchange.	St.	3
10	"	SOLDER, TIN-LEAD, wire, resin core, for internal connection.	Lb.	1,000
11	"	SOLDER, TIN-LEAD, solid, for plumbing underground cable joints, together with sufficient splicing material (less lead, sleeves) for 500 splices.	Lb.	1,000
12	"	SLEEVE, JOINTING, paper, for underground cable	Ea.	50,000
13	"	RINGING MACHINE, 17 or 20 cycle, battery driven, (* see note at end of Page 8) to be driven off filament battery (it is assumed that this can be done without noise at the repeaters).	Ea.	1
14	"	REPEATER, 4-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 22 terminating 4 wire repeaters. 1 lot of 6 terminating 4 wire repeaters. 1 lot of 6 terminating and 6 through 4- wire repeaters. 3 lots of 12 through 4-wire repeaters each. 3 lots of 6 through 4-wire repeaters each.	"	94
15	"	REPEATER, 2-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 8 2 lots of 4 each. NOTE: The repeaters in Items 14 and 15 are for use on underground cable with the following characteristics: 4-wire repeater: H-44-17 loading; 19 gauge or 20 lb. conductor. 2-wire repeaters: H-172-63 loading; 16 gauge or 40 lb. conductor.	"	16
16	"	RINGING EQUIPMENT SET, 4-wire, 500/20 or 1,000/20, with bay capacity to accommodate the following: 1 lot of 22. 2 lots of 6 each.	"	34
17	"	RINGING EQUIPMENT SET, 2-wire, 500/20 or 1,000/20, with bay capac- ity to accommodate the following: 1 lot of 8. 2 lots of 4 each.	"	16
18	"	PAY.	"	

12	"	SLEEVE, JOINTING paper, for underground cable	1	16
13	"	RINGING MACHINE. 17 or 20 cycle, battery driven, (* see note at end of Page 8) to be driven off filament battery (it is assumed that this can be done without noise at the repeaters).	1	16
14	"	REPEATER, 4-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 22 terminating 4 wire repeaters. 1 lot of 6 terminating 4 wire repeaters. 1 lot of 6 terminating and 6 through 4- wire repeaters. 3 lots of 12 through 4-wire repeaters each. 3 lots of 6 through 4-wire repeaters each.	94	16
15	"	REPEATER, 2-wire, with bay capacity to accommodate repeaters in following lots: 1 lot of 8 2 lots of 4 each. NOTE: The repeaters in Items 14 and 15 are for use on underground cable with the following characteristics: 4-wire repeater: H-44-17 loading; 19 gauge or 20 lb. conductor. 2-wire repeaters: H-172-63 loading; 16 gauge or 40 lb. conductor.	34	16
16	"	RINGING EQUIPMENT SET, 4-wire, 500/20 or 1,000/20, with bay capacity to accommodate the following: 1 lot of 22. 2 lots of 6 each.	34	16
17	"	RINGING EQUIPMENT SET, 2-wire, 500/20 or 1,000/20, with bay cap- acity to accommodate the following: 1 lot of 8. 2 lots of 4 each.	16	16
18	"	BAY, equipped for transmission and resistance measurements, cable fault localization, and testing, complete with oscillator.	1	16
19	"	TRANSMISSION MEASURING SET, portable, for battery operation.	2	16

CONFIDENTIAL

S. G. M. A. - 344 - 4500 - 200 000

CONFIDENTIAL

Item
No.

Stock
No.

Article

Unit

Required

20	None	BAY, capable of taking cable termination for 400 pairs.	St.	1
21	"	BATTERY, FILAMENT, capable of taking forty 4-wire repeat- ers, 20 ringing equipments, and a ring- ing machine load, each battery to have a capacity for 48 hours' service.	Ea.	2
22	"	BATTERY, PLATE, capable of taking forty 4-wire repeaters, each battery to have a capacity for 48 hours' service.	"	2
23	"	ENGINE, PETROL OR PARAFFIN, DRIVEN, each driving two generators for charging batteries in Items 21 and 22 at 7 hours' rate; complete with spare parts.	"	2
24	"	WIRE, CADMIUM-COPPER, 70 lbs. per mile, single conductor, bare solid; or .080 copperweld type (or equal) Ft. 5,280,000		
25	"	SWITCHBOARD, CB multiple, 16-position, equipped with 2,000 subscribers line circuits, 20 mag- neto junction circuits, and 20 automatic CB junction circuits; complete with subscribers relay sets and junction re- lay sets; miscellaneous circuits (such as cord test, interposition trunks, etc.) fuses; spare parts.	Ea.	1
26	"	DISTRIBUTION FRAME, main, 4,000 pairs capacity.	"	1
27	"	DISTRIBUTION FRAME, intermediate.	"	1
28	"	TEST CASE, with equipment, including voltmeter.	"	1
29	"	BATTERY, STORAGE, voltage as of switchboard (Item 25), 1,000 amp. hours capacity.	"	2
30	"	GENERATOR, petrol or paraffin engine, output 140 amps. at normal battery charging voltage for Item 29, complete with voltage hand regulator, spare parts.	"	2
31	"	RINGING MACHINE, battery-driven, for use with Item 25.	"	1

1897

23	"	ENGINE, PETROL OR PARAFFIN, DRIVEN, each driving two generators for charging batteries in Items 21 and 22 at 7 hours' rate; complete with spare parts.	"	2
24	"	WIRE, CADMIUM-COPPER, 70 lbs. per mile, single conductor, bare solid; or .080 copperweld type (or equal) Pt. 5,280,000	"	
25	"	SWITCHBOARD; CB multiple, 16-position, equipped with 2,000 subscribers line circuits, 20 mag-neto junction circuits, and 20 automatic CB junction circuits; complete with subscribers relay sets and junction re-lay sets; miscellaneous circuits (such as cord test, interposition trunks, etc.) fuses; spare parts.	Ea.	1
26	"	DISTRIBUTION FRAME, main, 4,000 pairs capacity.	"	1
27	"	DISTRIBUTION FRAME, intermediate.	"	1
28	"	TEST CASE, with equipment, including voltmeter.	"	1
29	"	BATTERY, STORAGE, voltage as of switchboard (Item 25), 1,000 amp. hours capacity.	"	2
30	"	GENERATOR, petrol or paraffin engine, output 140 amps. at normal battery charging voltage for Item 29, complete with voltage hand regulator, spare parts.	"	2
31	"	RINGING MACHINE, battery-driven, for use with Item 25.	"	1
32	"	CABLE, SWITCHBOARD, 42-wire.	Ft.	10,560
33	"	CABLE, SWITCHBOARD, 63-wire.	"	15,840
34	"	WIRE, JUMPER, (cross-connecting), for Items 26 & 27.	"	10,560
35	"	MAINTENANCE SET, tools for CB exchange.	"	

1897

St. ³CONFIDENTIAL

CONFIDENTIAL
Item
No. Stock
No.

Item No.	Stock No.	Article	Unit	Required
36	None	<u>SOLDER, TIN-LEAD,</u> wire, resin core, for internal connections.	Lb.	1,000
37	"	<u>SOLDER, TIN-LEAD,</u> solid, for plumbing underground cable joints, together with suffic- ient splicing material (less lead sleeves) for 500 splices.	"	1,000
38	"	<u>SLEEVE, JOINTING,</u> paper, for underground cable.	Ea.	50,000
39	"	<u>SWITCHBOARD, TOLL TYPE,</u> long distance, 6-positions equipped for 20 ring-down long distance trunks and 20 junctions to board covered by Item 25 all with relay sets; trunks to be multipled on alternate positions.	"	1
40	"	<u>RINGING MACHINE,</u> 17 or 20 cycle battery driven, for use with Item 39, to be driven off filament battery.	"	1
41	"	<u>REPEATER,</u> 4-wire, with bay capacity to accom- odate repeaters in following lots: 1 lot of 13 through 4-wire repeaters. 4 lots of 10 through 4-wire repeaters. 1 lot of 3 terminating and 7 through 4-wire repeaters. 1 lot of 8 terminating 4-wire repeat- ers. 1 lot of 4 terminating 4-wire repeat- ers. 1 lot of 6 through 4-wire repeaters 1 lot of 4 through 4-wire repeaters. 1 lot of 3 through 4-wire repeaters. Ea.	Ea.	83
42	"	<u>REPEATERS,</u> 2-wire, with bay capacity to accom- odate repeaters in following lots: 1 lot of 14. 1 lot of 13. 1 lot of 12. 4 lots of 6 each. 2 lots of 5 each. 6 lots of 3 each.	Ea.	91

NOTE: The repeaters in Items 41
and 42 are for use on underground
cable with the following character-
istics:

38	"	<u>SLEEVE, JOINTING,</u> paper, for underground cable.	Ea.	50,000
39	"	<u>SWITCHBOARD, TOLL TYPE,</u> long distance, 6-positions equipped for 20 ring-down long distance trunks and 20 junctions to board covered by Item 25 all with relay sets; trunks to be multiplied on alternate positions.	"	1
40	"	<u>RINGING MACHINE,</u> 17 or 20 cycle battery driven, for use with Item 39, to be driven off filament battery.	"	1
41	"	<u>REPEATER,</u> 4-wire, with bay capacity to accom- odate repeaters in following lots: 1 lot of 13 through 4-wire repeaters. 4 lots of 10 through 4-wire repeaters. 1 lot of 3 terminating and 7 through 4-wire repeaters. 1 lot of 8 terminating 4-wire repeat- ers. 1 lot of 4 terminating 4-wire repeat- ers. 1 lot of 6 through 4-wire repeaters 1 lot of 4 through 4-wire repeaters. 1 lot of 3 through 4-wire repeaters. Ea.		88
42	"	<u>REPEATERS,</u> 2-wire, with bay capacity to accommo- date repeaters in following lots: 1 lot of 14. 1 lot of 13. 1 lot of 12. 4 lots of 6 each. 2 lots of 5 each. 6 lots of 3 each.	Ea.	91
		NOTE: The repeaters in Items 41 and 42 are for use on underground cable with the following character- istics: 4-wire repeater: (H-44-17) loading: 19 gauge or 20 lb. conductor. 2-wire repeaters: H-172-63 loading; 16 gauge or 40 lb. conductor.		
43	"	<u>RINGING EQUIPMENT SET,</u> 4-wire, 500/20 or 1,000/20, with bay capacity to accommodate 3 lots of 3 each.	St.	9

CONFIDENTIAL

Item No.	Stock No.	Article.	Unit.	Required.
44	None	RINGING EQUIPMENT SET, 2-wire, 500/20 or 1,000/20, with bay capacity to accommodate one lot of each of the following: 14, 13, 11, 6, 5, and 3.	St.	52
45	"	BAY, equipped for transmission and resis- tance measurement; cable fault loca- tion, and testing, complete with oscillators.	St.	6
46	"	AVOLTIETER, or voltmeters and current flow test sets.	Ea.	2
46a	"	TRANSMISSION MEASURING SET, portable, for battery operation.	St.	4
47	"	BAY, capable of taking cable termination for 200 pairs.	"	18
48	"	BATTERY, FILAMENT, capable of taking forty 4-wire repeat- ers, 20 ringing equipments, and a ringing machine load, each battery to have a capacity for 48 hours' service.	Ea.	8
49	"	BATTERY, PLATE, capable of taking forty 4-wire repeat- ers, each battery to have a capacity for 48 hrs' service.	"	8
50	"	BATTERY, FILAMENT, capable of taking twenty 4-wire repeat- ers, 20 ringing equipments, and a ring- ing machine load, each battery to have a capacity for 48 hours' service.	"	12
51	"	BATTERY, PLATE, capable of taking twenty 4-wire repeat- ers, each battery to have a capacity for 48 hours' service.	"	12
52	"	BATTERY, FILAMENT, capable of taking ten 4-wire repeaters and 10 ringing equipments, each battery to have a capacity for 48 hours' service.	"	12
53	"	BATTERY, PLATE, capable of taking ten 4-wire repeaters, each battery to have a capacity of 48 hours' service.	"	16

16
1896

45	"	equipped for transmission and resistance measurement; cable fault localization, and testing, complete with oscillators.	St.	6
46	"	<u>AVOLTER.</u> or voltmeters and current flow test sets.	Pa.	2
46a	"	<u>TRANSMISSION MEASURING SET,</u> portable, for battery operation.	St.	4
47	"	<u>BAY.</u> capable of taking cable termination for 200 pairs.	"	18
48	"	<u>BATTERY, FILAMENT,</u> capable of taking forty 4-wire repeaters, 20 ringing equipments, and a ringing machine load, each battery to have a capacity for 48 hours' service. Ea.		8
49	"	<u>BATTERY, PLATE,</u> capable of taking forty 4-wire repeaters, each battery to have a capacity for 48 hrs' service.	"	8
50	"	<u>BATTERY, FILAMENT,</u> capable of taking twenty 4-wire repeaters, 20 ringing equipments, and a ringing machine load, each battery to have a capacity for 48 hours' service.	"	12
51	"	<u>BATTERY, PLATE,</u> capable of taking twenty 4-wire repeaters, each battery to have a capacity for 48 hours' service.	"	12
52	"	<u>BATTERY, FILAMENT,</u> capable of taking ten 4-wire repeaters and 10 ringing equipments, each battery to have a capacity for 48 hours' service.		16 1896
53	"	<u>BATTERY, PLATE,</u> capable of taking ten 4-wire repeaters, each battery to have a capacity of 48 hours' service.	"	16
54	"	<u>ENGINE, PETROL OR PARAFFIN DRIVEN,</u> each driving two generators for charging batteries in Items 48, 49, 50, 51, 52, & 53, at 7 hours' rate; complete with spare parts (or equivalent).	"	20
55	"	<u>MAINTENANCE SET,</u> tools, for repeater stations.	St.	12

CONFIDENTIAL

CONFIDENTIAL

Item No.	Stock No.	Article	Unit	Required.
56	None	<u>SWITCHBOARD.</u> CB multiple, 10-position, equipped with 1,400 subscribers line circuits, 20 magneto junction circuits, and 20 automatic CB junction circuits, complete with subscribers relay sets and junction relay sets, miscellaneous circuits (such as cord test, inter position trunks, etc.), fuses spare parts.	Ea.	2
57	"	<u>SWITCHBOARD;</u> CB multiple, 6-positions, equipped with 800 subscribers line circuits 20 magneto junction circuits, and 20 automatic CB junction circuits, complete with subscribers relay sets and junction relay sets, miscellaneous circuits (such as cord test, inter position trunks, etc.) fuses, spare parts.	"	3
58	"	<u>DISTRIBUTION FRAME,</u> main, 3,000 pairs capacity, complete with protection.	"	2
59	"	<u>DISTRIBUTION FRAME,</u> main, 2,000 pairs capacity, complete with protection.	"	3
60	"	<u>DISTRIBUTION FRAME,</u> intermediate (to be associated with main distribution frames, Items 58 & 59; combined MDF and IDF will suffice in each case, provided the main frame sections have the required capacity).	"	5
61	"	<u>BATTERY, STORAGE,</u> voltage as of switchboard (Item 56), 800 amp. hours capacity.	"	4
62	"	<u>BATTERY, STORAGE,</u> voltage as of switchboard (Item 57), 600 amp. hours capacity.	"	6
63	"	<u>TEST CASE,</u> with equipment; including voltmeter.	"	5
64	"	<u>GENERATOR,</u> petrol or paraffin engine driven, output 110 amps. at normal battery charging voltage for Item 61, complete with voltage hand regulator, spare parts.	"	2

Fig. 2

3
=

2 =

3
=5
11
53

711

611

5 =

"

11

56 "

S. G. M. A. - 544 - 1490 - 210 050

CONFIDENTIAL

No.

No.

Article

Unit

Required

67 None

CABLE, SWITCHBOARD,
42-wire.

Ft. 14,560

68

"

CABLE, SWITCHBOARD,
63-wire.

" 19,840

69

"

WIRE, JUMPER,
(cross-connecting)

" 13,560

70

"

SWITCHBOARD, TOLL TYPE,
long distance, 4-position, equipped
for 20 ring-down long distance trunks,
one switchboard with 10 junctions to
the board covered by Item 56 and two
switchboards each with 10 junctions
to one of the boards covered by Item
57 (i.e., the third board under Item
57 will have no junctions to a toll
board), each with relay sets, trunks
to be multipled on alternate posit-
ions.

Ea. 4

71

"

RINGING MACHINE,
17 or 18 cycle, battery driven, for
use with Item 70, to be driven off
filament battery.

" 4

72

"

MAINTENANCE SET,
tools, for CB exchange.

St. 12

73

78-9329.2

TRUCK, CARGO BODY,
1-1/2 ton, 4 x 4, 2-DT

Ea. 70

74

None

TRUCK, CARGO, BODY,
3/4 ton.

" 30

JUSTIFICATION:

1. This requisition provides for a minimum of essential local and long distance telephone service restoration to ensure the early release of military communications equipment initially installed, and to relieve the communications problems for Civil Administration. The requirements listed provide for a minimum long distance service for Naples (where L.D. equipment and building were completely destroyed), and for minimum local and long distance service for Rome, and for other undersigned cities in Northern Italy covering needs for essential rehabilitation.

Distribution will be as follows:-

Items 1 to 6, inc. - for Naples
Items 7 to 24, inc. - for Rome
Items 25 to end - for Northern Italy.

1895

2. This requisition has been made from requirements lists prepared by Communications Subcommission, A.C.C., in collaboration with Signals A.F.H.Q.

3. All locally available equipment has been taken into account. This requisition lists only those needs which must come from overseas

long distance, 4-pole, for 20 ring-down long distance trunks, one switchboard with 10 junctions to the board covered by Item 56 and two switchboards each with 10 junctions to one of the boards covered by Item 57 (i.e., the third board under Item 57 will have no junctions to a toll board), each with relay sets, trunks to be multiplied on alternate positions.

71	"	RINGING MACHINE, 17 or 18 cycle, battery driven, for use with Item 70, to be driven off filament battery.	Ea.	4
72	"	MAINTENANCE SET, tools, for CB exchange.	St.	12
73	78-9329.2	TRUCK, CARGO BODY, 1-1/2 ton, 4 x 4, 2-DT	Ea.	70
74	None	TRUCK, CARGO, BODY, 3/4 ton.	"	30

JUSTIFICATION:

1. This requisition provides for a minimum of essential local and long distance telephone service restoration to ensure the early release of military communications equipment initially installed, and to relieve the communications problems for Civil Administration. The requirements listed provide for a minimum long distance service for Naples (where L.D. equipment and building were completely destroyed), and for minimum local and long distance service for Rome, and for other undersignated cities in Northern Italy covering needs for essential rehabilitation.

Distribution will be as follows:-

Items 1 to 6, inc.	- for Naples
Items 7 to 24, inc.	- for Rome
Items 25 to end	- for Northern Italy.

1995

2. This requisition has been made from requirements lists prepared by Communications Subcommission, A.C.C., in collaboration with Signals A.F.H.Q.

3. All locally available equipment has been taken into account. This requisition lists only those needs which must come from overseas sources.

4. Full consideration has been made for lack of destruction in Rome.

5. A.C.C. is with its present and prospective personnel prepared to:-
 a. Train Italian Personnel.
 b. Supervise Italian Personnel in the operation of this Communication equipment.

0 3 8 2

CONFIDENTIAL

6. If this equipment is approved by CC/S normal sale procedure to the Italian Government will apply.

7. The following comments are made with reference to specific items on this requisition:-

Item 1 - This toll board will initially handle a very limited number of circuits entirely on a delayed basis. Recording of outgoing calls will be handled on a separate installation which is available locally. Also available locally is equipment to modify (as necessary) the circuits from the proposed toll board to the existing local network. The proposed toll board will be located in an existing repeater station at which a distribution frame and a 24-volt battery, with charging equipment, is available.

Items 14, 15 - It is anticipated that cable terminations and distributing frames for the small repeater stations can be supplied locally.

Item 16 - 20/500 ringers are specified because the normal ringing in Italy is 500 cycles. However, 20/1000 ringers may be substituted though these are less desirable because of flexibility.

Item 20 - "Bay" is British nomenclature. The American equivalent would be a distributing frame with 400 pairs protected, to terminate outside cables, plus connecting blocks as required for inside wiring to toll terminal equipment and to the toll switchboard. Sufficient silk and cotton tip cable, switchboard cable, and connecting blocks should be provided for the installation.

8. As a general condition, it would be preferable to supply like items of the same type and manufacture of equipment or the various installations for reasons of initial installation flexibility and for future maintenance. However, the supply of miscellaneous small items necessary for any required modification are available locally, so that the importance of common types of items is to be placed secondary to that of securing the large, major items in as short a time as possible.

9. Attempt has been made to describe items in a manner that will provide maximum flexibility in selecting and substituting materials to fill this requisition.

RATING: TWO

LANDED COSTS:- Information is requested with the manifests as to itemized costs & whether F.O.B. or C.I.F. If F.O.B. state approximate percentage to be added for freight.

Information Copies to:-

The Directorate of Civil Affairs,
War Office, Whitehall,
London, S.W.1. (4 copies)
CC SOS Natoussa for SSGDS (4 copies)
N.Y.P.E. (4 copies)
G-4, AFHQ.
Signals, AFHQ.
Q(AE), AFHQ.
Ordnance, AFHQ.

available. Items 14, 15 - It is anticipated that cable terminations for distributing frames for the small repeater stations can be supplied locally.

Item 16 - 20/500 ringers are specified because the normal ringing in Italy is 500 cycles. However, 20/1000 ringers may be substituted though these are less desirable because of flexibility.

Item 20 - "Bay" is British nomenclature. The American equivalent would be a distributing frame with 400 pairs protected, to terminate outside cables, plus connecting blocks as required for inside wiring to toll terminal equipment and to the toll switchboard. Sufficient silk and cotton tip cable, switchboard cable, and connecting blocks should be provided for the installation.

8. As a general condition, it would be preferable to supply like items of the same type and manufacture of equipment or the various installations for reasons of initial installation flexibility and for future maintenance. However, the supply of miscellaneous small items necessary for any required modification are available locally, so that the importance of common types of items is to be placed secondary to that of securing the large, major items in as short a time as possible.

9. Attempt has been made to describe items in a manner that will provide maximum flexibility in selecting and substituting materials to fill this requisition.

RATING: TWO

LANDED COSTS: Information is requested with the manifests as to itemized costs & whether F.O.B. or C.I.F. If F.O.B. state approximate percentage to be added for freight.

Information Copies to:-

The Directorate of Civil Affairs,
War Office, Whitehall,
London, S.W.1. (4 copies)
CG SOS Natoussa for SSGDS (4 copies)
N.Y.P.E. (4 copies)
G-4, AFHQ.
Signals, AFHQ.
Q(AE), AFHQ.
Ordnance, AFHQ.

* Page 2, Item 13 refers; insert at * - "for use with SWITCHBOARD, TOLL TYPE, long distance, 10-position, equipped for 30 ring-down long distance trunks, complete with relay sets, trunks multiplied on alternate positions",

"THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENCE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT, U.S.C. 50; 31 AND 32. THE TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW".

CONFIDENTIAL

ALLIED FORCE HEADQUARTERS
Signal Section

15 November 1944

475.7/8

NOTES ON
AC REQUISITION - ITALY

1. Sent to CCS by Radio, as LAC AIRGRAM 39, 29 June 1944. This was also requisition MGS-184-SIG, and requested 74 items of equipment.
2. Comment from CCS by Radio #CAL 662 dated 11 August 1944 to the effect that:-
 - a. Requisition should be referred to Theatre Military Commander.
 - b. Theatre should fill as far as possible from surplus military stocks.
 - c. Theatre should order remaining military type items thru military channels.
 - d. AC should re-order the balance.
3. Reply to AGWAR for CCS by Radio LAC 706 dated 21 September 1944, to the effect that:-
 - a. Certain items on LAC-39 could now be deleted due to recent installations in NAPLES and ROME.
 - b. Certain items had been classified as military type and would be supplied thru military supply sources, upon approval of balance from civil sources by CCS.
4. Comment from CCS on above, by Radio CAL-867 dated 19 October 1944, to the effect that the commercial items requested could be procured only with 10 months delay and asked that the requisition be reviewed and military items be substituted wherever possible.
5. Copy of CAL-867 sent by G-5 to AC ROME for action and no reply received to date.
6. All above per messages in our file, or verbal from Capt. GRADY, G-5.
7. It therefore appears that as yet no positive action has been taken by CCS for procurement of items requested.

K. K. KLAMMER,
Capt., Signal Corps.

0385

NORTH ITALY SWITCHBOARD REVIEW

LOCATION	CIVIL TYPE SWITCHBOARD POSITIONS				MILITARY TYPE SWITCHBOARDS					
	Mil. L.D.	AC L.D.	AG Local.	Initial Mil. L.D.	Military Local	Required	Source	Type	Source	Type
FIORINCE	10	Exist.	2	Exist.	Dial	Exist.	-	-	-	-
BOLOGNA	8	On Hand	4	N.S.	6	FATME	-	-	-	-
MARSTRA (VENICE)	6	O. S.	4	N.S.	6	FATME	200 C.B.	AFHQ/9	-	-
TRIESTE	8*	FATME	2	N.S.	6	FATME	200 C.B.	AFHQ/9	1-PTRK*	Use Exis- ing Auto
MILAN	8*	FATME	8	FATME	16	FATME	3 pos.* TC-1	HAPLES	-	-
TURIN	6*	FATME	6	FATME	10	FATME	3 pos.* TC-10	Use Exist- ing Auth.	-	-
LEGHORN	4**	FATME	-	-	Dial	Being Repaired	3 pos. TC-1	PBS	9 pos. TC-1 12 pos. #11	PBS-Ext PBS-Pre
GENOVA	-	-	-	-	-	-	200 C.B.	AFHQ/9	-	-
GENOVA	8	O. S.	6	FATME	10	FATME	3 pos. TC-1	AFHQ/9	1-PTRK*	Use Exis- ing Auto
UDINE	-	-	-	-	-	-	2 pos. 551 G-1	AFHQ/9	-	-
VERONA	-	-	-	-	-	-	2 pos. 551 G-1	AFHQ/9	-	-
SUMMARY										
Existing	10		2							
On Hand	8		1							
O.S. - Old State	14		1							
N.S. - New State	-		12							
FATME	26		20		54					

* Combined Approval Requested in AAI Letter, 29 October.
** Additional Combined Requirement.

NORTH ITALY SWITCHBOARD REVIEW

CIVIL TYPE SWITCHBOARD POSITIONS					MILITARY TYPE SWITCHBOARDS				REMARKS
L.D.	Source	AC I.D.	AC Local	Source	Initial Mil. I.D.	Source	Military Local	Source	
Exist.	2	Exist.	Dial	Exist.	-	-	-	-	
On Hand	4	N.S.	6	FATME	-	-	-	-	
O. S.	4	N.S.	6	FATME	200 C.B.	AFHQ/9	-	-	
FATME	2	N.S.	6	FATME	200 C.B.	AFHQ/9	1-PHIX*	Use Exist. ing Auth.	
FATME	8	FATME	16	FATME	8 pos. ^a TC-1	NAPLES	-	-	
FATME	6	FATME	10	FATME	3 pos. ^a TC-10	Use Exist- ing Auth.	-	-	
FATME	-	-	Dial	Being Repaired	3 pos. TC-1	PH3	9 pos. TC-1 12 pos. #11	PH3-Exist. PH3-Prop.	
-	-	-	-	-	200 C.B.	AFHQ/9	-	-	
O. S.	6	FATME	10	FATME	3 pos. TC-1	AFHQ/9	1-PHIX*	Use Exist- ing Auth.	
-	-	-	-	-	2 pos. 551 G-1	AFHQ/9	-	-	
-	-	-	-	-	2 pos. 551 G-1	AFHQ/9	-	-	
2									
12									
20									
54									

* Combined Approval Requested in AFI Letter, 29 October.
 ** Additional Combined Requirement.

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489081 Ext: 555

13th December, 1944

In reply
refer to: T. 36.22.03

Subject: Information for Report

To: Director-General, F.E.F.I., Lungotevere Marzio 11,
Rome.

35 III
see part III

1. Would you kindly supply the following information by
23rd December for an A.C. Headquarters report.

2. Please make a list of all F.E.F.I. exchanges of over
200 lines capacity within Italian administered territory, classify-
ing each exchange equipment in one of the following classes,
according to the condition at the time of the Allied entry into
the town.

A. Destroyed
B. Seriously damaged but suitable for repair (wholly
or partly).
C. Damaged but not seriously
D. O.K.

The number of lines capacity and its type (i.e. manual
or auto.) should be stated.

3. As regards exchanges with under 200 lines capacity
it would be useful if you could state the approximate percentage
of the exchange equipment which was destroyed or not suitable for
repair.

4. It is realised that some of the above information
has been supplied before but complete details as above are now
required.

1892

J. L. HENDERSON
Colonel,
Director.

13th December, 1944

Declassified E.O. 12356 Section 3.3/NND No. 785015

In reply
refer to: T. 56.42.05

Subject: Information for Report

To: Director-General, F.E.T.I., Lungotevere Mario II,
Rome.

1. Would you kindly supply the following information by
23rd December for an A.C. Headquarters report.

2. Please make a list of all F.E.T.I. exchanges of over
200 lines capacity within Italian administered territory, classify-
ing each exchange equipment in one of the following classes,
according to the condition at the time of the Allied entry into
the town.

a. Destroyed
b. Seriously damaged but suitable for repair (wholly
or partly).
c. Damaged but not seriously
d. O.K.

The number of lines capacity and its type (i.e. manual
or auto.) should be stated.

As regards exchanges with under 200 lines capacity
it would be useful if you could state the approximate percentage
of the exchange equipment which was destroyed or not suitable for
repair.

It is realised that some of the above information
has been supplied before but complete details as above are now
required.

J. L. HENDERSON
Colonel,
Director.

1892

File

HTWW/epc

HEADQUARTERS
ALLIED COMMISSION
APC 294
Communications Sub-Commission
Tel: 429081 Ext: 555

13th December, 1944

In reply
refer to: T.36.21 .03

Subject : Information for Report

To : Director General, S.E.T., Naples

Would you kindly supply the following information by
23rd December, for an A.C. Headquarters report.

1. Please make a list of all S.E.T. exchanges with over 200
lines capacity classifying each equipment in one of the following
classes, according to its condition at the time of the Allied entry
into the town.

- a. Destroyed
- b. Seriously damaged but suitable for repair (wholly
or partly).
- c. damaged, but not seriously
- d. O.K.

The number of lines capacity, and its type (i.e. manual
or auto.) should be stated.

As regards exchanges with under 200 lines capacity it would
be useful if you could state the approximate percentage of the
exchange equipments, which was destroyed or not suitable for repair.

J.L. HENDERSON
Colonel,
Director.

1891

15th December, 1944

In reply
refer to: T.36.21 .CS

Subject : Information for Report

To : Director General, S.E.T., Naples

1. Would you kindly supply the following information by
23rd December, for an A.C. Headquarters report.

2. Please make a list of all S.E.T. exchanges with over 200
lines capacity classifying each equipment in one of the following
classes, according to its condition at the time of the Allied entry
into the town.

a. Destroyed
b. Seriously damaged but suitable for repair (wholly
or partly).
c. damaged, but not seriously
d. O.K.

The number of lines capacity, and its type (i.e. manual
or auto.) should be stated.

3. As regards exchanges with under 200 lines capacity it would
be useful if you could state ~~the~~ the approximate percentage of the
exchange equipments, which was destroyed or not suitable for repair.

J.L.HENDERSON
Colonel,
Director.

1891

File

HTMM/epc

HEADQUARTERS
ALLIED COMMISSION
AFC 394
Communications Sub-Commission
Tel: 489081 Ext: 555

13th December, 1944

In reply
refer to:

T.36.10.CS

Subject : Information for Report

To : Director-General, S.T.E.T., Via Versilia 2, Rome.

1. Would you kindly supply the following information by 23rd December, for an A.C. Headquarters report.

2. Please make a list of all TMO exchanges of over 200 lines capacity within Italian administered territory classifying each exchange equipment in one of the following classes, according to the condition at the time of the Allied entry into the town.

- a. Destroyed
- b. Seriously damaged, but suitable for repair (wholly or partially)
- c. Damaged but not seriously
- d. O.K.

The number of lines capacity and the type (i.e. manual or auto.) should be stated.

3. As regards exchanges with under 200 lines capacity it would be useful if you could state the approximate percentage of the exchange equipment which was destroyed or not suitable for repair.

4. It is realised that some of the above information has been supplied before but complete details as above are now required.

J.L.HENDERSON
Colonel,
Director.

1890

13th December, 1945

In reply
refer to: T.36.10.CS

Subject : Information for Report

To : Director-General, S.T.E.C., Via Versilia 2, Rome.

Would you kindly supply the following information by 23rd December, for an A.C. Headquarters report.

1. Please make a list of all TMC exchanges of over 200 lines capacity within Italian administered territory classifying each exchange equipment in one of the following classes, according to the condition at the time of the Allied entry into the town.

- a. Destroyed
- b. Seriously damaged, but suitable for repair (wholly or partially)
- c. Damaged but not seriously
- d. C.K.

The number of lines capacity and the type (i.e. manual or auto.) should be stated.

As regards exchanges with under 200 lines capacity it would be useful if you could state the approximate percentage of the exchange equipment which was destroyed or not suitable for repair.

It is realised that some of the above information has been supplied before but complete details as above are now required.

J.L.HENDERSON
Colonel,
Director.

1290

File

HHS/epc

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489081 Ext: 555

13th December, 1944

In reply
refer to: T.36.19.CS

Subject: Toll Boards Ex. Florence

To : C.S.O., E. of C., Italy
Att: Major Rhyme, HQs. A.A.I.

1. The F.A.C.E. informs us that in order to complete the rehabilitation of the toll boards as arranged by Major Tucker, a total of 1800 switchboard lamps are required of which none are available from civilian sources.

2. It is understood from telephone conversation that you will endeavour to supply these lamps from military sources. They should be delivered to F.A.C.E.

J.L.HENDERSON
Colonel,
Director.

1089

F. A. C. E.**FABBRICA APPARECCHIATURE PER COMUNICAZIONI ELETTRICHE**

SOCIETA' ANONIMA - SEDE IN MILANO - CAPITALE VERSATO L. 20.000.000

C. P. C. MILANO 231263 - C/C POSTALE 3/25508

Telegrammi: } Comelettrica - Milano
Comelettrica - Roma**STABILIMENTI:**MILANO - VIA LUIGI BODIO N. 33
TEL. 691951-2-3-4 - 690010 - 691903MILANO - VIA V. COLONNA N. 9
TELEFONI 41-341 - 2 - 3**UFFICI:**MILANO - VIA LUIGI BODIO N. 33
TEL. 691951-2-3-4 - 690010 - 691903ROMA - VIA EMILIA N. 85
TELEFONO 481200ROMA, 9 Dicembre, 1944
VIA EMILIA, 86Nella risposta riferirsi a: Boll. Ro. 44 Bi/AC.

Risposta allo Vostro

Preg.mo Signor
Col. H. H. SCUDDER
A. C. Communication
Sub-Commission
R O M ATavoli per servizio telefonico interurbano

A seguito di quanto segnalato verbalmente, mi pre-
gio comunicarLe il quantitativo di lampadine telefoniche necessarie
per equipaggiare i 9 Tavoli riguardanti le 4 Centrali interurbane di
cui al verbale dell'On.le Azienda di Stato del 9.11.1944 posiz. A.1)
B.1), B.2), B.3).

Lampadine a 24 Volt
" " 18 "
" " 12 "

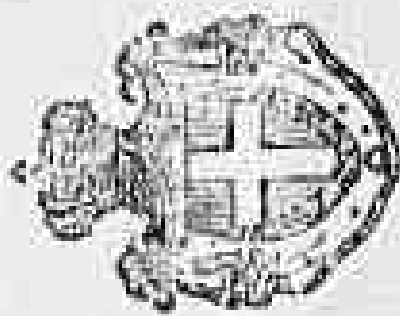
No. 932 1500
" 602 650
" 140 150

Il suddetto quantitativo è quello strettamente ne-
cessario per cui credo sarebbe bene considerare una maggiorazione
del 10% per scarti e scorta.

Distinti ossequi

Ing. F. BIFFI

1988



MINISTERO DELLE COMUNICAZIONI
AZIENDA DI STATO PER I SERVIZI TELEFONICI

REPARTO

2°

UFFICIO

1°

PROT. N. 29658/510-4 ALLEGATI

OGGETTO:

Sistemazione tavoli interurbani prelevati dalla centrale
interurbana di Firenze.

ALTA COMMISSIONE ALLEATA
SOTTOCOMMISSIONE COMUNICAZIONI

A seguito della nota N. 29050/510-4 del 10 novembre u.s. si
comunica a codesta Commissione che per l'approntamento dei tavoli
interurbani in conformità al piano di lavoro elaborato da questa
Azienda d'accordo con la Tace e di cui al verbale già trasmesso,
sarebbe necessario provvedere subito e far trasportare in Roma da
Firenze il telaio per 60 giunzioni interurbane colà installato.

Detto telaio servirebbe per predisporre le 6 posizioni da
approntare per le esigenze militari per Genova e di cui al già ci-
tato verbale del 9 novembre u.s. come A/1.

Detto telaio dovrebbe essere portato a Roma alla Tace (Pa-
lazzo Pirelli) completo delle placche e degli organi sullo stesso
ancora installati.

Sarà gradito un cenno di assicurazione.

RECEIVED
6/12

IL SOTTOSEGRETARIO DI STATO 1887

[Handwritten signature]

Not. 9. (A. I.)

ROMA.

19

117

RISPOSTA AL N.

DEL

AZIENDA DI STATO PER I SERVIZI TELEFONICI

REPARTO

2°

UFFICIO

1°

RISPOSTA AL N.

DEL

PROT. N. 29658/510-4 ALLEGATI

OGGETTO: Sistemazione tavoli interurbani prelevati dalla centrale interurbana di Firenze.

ALTA COMMISSIONE ALIATA
SOTTOCOMMISSIONE COMUNICAZIONI

A seguito della nota N.29050/510-4 del 10 novembre u.s. si comunica a codesta Commissione che per l'approntamento dei tavoli interurbani in conformità al piano di lavoro elaborato da questa Azienda d'accordo con la Pace e di cui al verbale già trasmesso, sarebbe necessario provvedere subito a far trasportare in Roma da Firenze il telaio per 60 giunzioni interurbane colà installato.

Detto telaio servirebbe per predisporre le 8 posizioni da approntare per le esigenze militari per Genova e di cui al già citato verbale del 9 novembre u.s. comma A/1.

Detto telaio dovrebbe essere portato a Roma alla Pace (Piazzo Pirelli) completo delle placche e degli organi sullo stesso ancora installati.

Sarà gradito un cenno di assicurazione.

IL SOTTOSEGREARIO DI STATO

REC
6/12

HEADQUARTERS
ALLIED COMMISSIONAPO 392
Communications Sub-Commission
Tel: 489061 Ext:555

12th December, 1944

In reply
refer to: T.36.16.05

Subject: F.A.T.M.E. Switchboards.

To: Under-Secretary of state for PP.TT.

1. Your letter No.29730/410 PC of 2nd December, has just been received. It is thought that A.C. letter No.T.36.10.C5 makes the position clear, but a further statement is given below.

2. Certain switchboards will be made by F.A.T.M.E. for the Allied Forces who will place the contract themselves, if they have not already done so. These will be sold to the Italian Government or to the Concessionary companies at a reasonable price when the military no longer require their use.

3. The Italian Government or the S.I.E.T. will place orders with F.A.T.M.E. for the switchboards mentioned in A.C. letter No. T.36.10.C5 of 7th December payment to be made to F.A.T.M.E. by the Italian Government or S.I.E.T. whichever places the contract.

J.L.HENDERSON
Colonel,
Director.

1986

115

TRANSLATION BY BELAN.

TO:
ALLIED COMMISSION
POSTS AND TELECOMMUNICATIONS SUB-COMMISSION
APC 394

8/12/44

Ref. : 29730/510 PG

SUBJECT. : Specificatio-n of Fatme supply, new inter- urban switchboards.

Following letter no. 29604/510 PG of the 1st December 1944, we inform you that our Agency is ready to withdraw the positions, made by the FATME, according to the agreed specification, to be consigned ^{see 8} by the Allied Authorities at cost price, if they are in very good condition of working and maintenance.

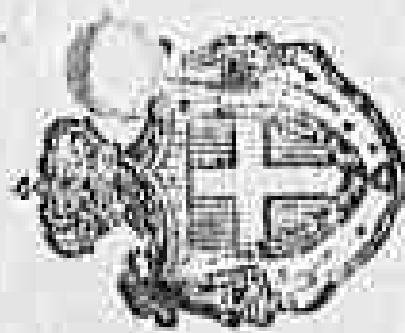
THE UNDER SECRETARY OF STATE FOR POSTS AND TELECOMMUNICATIONS.

CROSS REFS.	
FILE	b, fwd.
T-80.CX	

Date 10/12/44

Director	<i>MA</i>
D. Director	<i>7/10/44</i>
Chief. Telecoms	<i>ROM</i>
Chief. Postal	
H. Q. Coms. O.	
Asst. Chief Postal	
Censorship	
Chief Clerk	

1885



MINISTERO DELLE COMUNICAZIONI
AZIENDA DI STATO PER I SERVIZI TELEFONICI

REPARTO 2° UFFICIO 1°

PROT. N. 29730/510 PG ALLEGATI

OGGETTO: Specifica fornitura Pathe, nuovi tavoli interurbani.

RISPOSTA AL N. _____
DEL _____

ALLA COMMISSIONE ALLEATA
SOTTOCOMMISSIONE COMUNICAZIONI

Facendo seguito alla lettera N.29604/510 PG del 1° Dicembre u.s., si comunica che questa Azienda è pronta a rilevare i posti di lavori costruiti dalla Pathe in conformità alle specifiche concordate, che saranno consegnati dalle Autorità Alleate al prezzo di acquisto attuale, purchè in ottime condizioni di funzionamento e di conservazione.

IL SOTTOSEGRETARIO DI STATO

1584

VI 3 to Naples - 29th November to

1st December, 1944

Matters discussed, etc.

(1) LAC Airgram 39

This A.F.H.Q. requisition for commercial plant for A.C. and Italian Government use was discussed with Lt. Col. Beck, Capt. Klammer, and Capt. Keble of C.S.O.'s office, A.F.H.Q. and Capt. Bitterworth and Capt. Brady of G-5 (Economics and Supply) A.F.H.Q., with a view to the replacement of commercial items with military in accordance with Combined Board instructions.

Military codes were listed, but some items such as batteries and charging plant could not be given military codes. Capt. Klammer stated that such items, though commercial, could be obtained as commercial items necessary for military use, since they were used also by Signal Corps. It was arranged therefore that on receipt of A.C. new requisition G-5 and C.S.O. would make the necessary arrangements together for the ordering of all of the items as military needs in the same way as for any operational military project.

A statement would be given with the requisition that the plant was needed to exercise A.M.Q. and Italian control to prevent unrest, etc. in accordance with an instruction A.F.H.Q. held (dealing with the classification of civilian requirements as military projects.)

(Note: The draft letter and specification sent to Requisition division A.C. includes a few other points discussed).

Capt. Klammer was asked whether it was the case that switchboard cable had been ordered for Borsa Exchange. He was not certain but would enquire. A.F.H.Q. had not ordered it.

2. Italian Army Circuit:- Bari - Naples.

The statement was made in a letter from the State that the Bari-Salerno and Salerno-Naples repeated circuits that were to be combined to form the above telegraph circuit had been taken by the Allies. An investigation with Major Brady showed that this was not the case. Major Brady said that the former had not been touched and so far as he could find out the latter was in civilian use as a telephone circuit. He said that if the latter were needed in its present capacity for the traffic experienced, he might be able to find another to extend the Bari-Salerno circuit to Naples.

The point will be raised with the State (done).

1883

3. Misc. Matters:

Miscellaneous matters was discussed with Capt. Bridgeman.

(a) The S.E.F. liaison officer was asked whether Benevento and Avelino auto. exchange could now be installed. He consulted the Chief Engineer who agreed they would shortly be installed, and

had enough evidence to cable.

(b) As regards the 5 digit equipment found at Naples, the Chief Engineer knew about this equipment and could not release the 5 digit equipment, (later reserved for Naples), for places such as Foglia if required. Apparently a fair proportion of this 5 digit equipment had been obtained from plant held for prospective extensions, and not only from plant removed from damaged exchanges. Some of this plant can be used for repair work.

(c) The S.E.T. had prepared a circuit restoration programme for Naples Province which was inspected proving to be very thorough. A copy will be sent here. Plans are also in preparation for other S.E.T. Provinces.

A programme of restoration of exchanges is also in hand.

(d) The 12 position civil board in military use was inspected, and the four position state board. The latter will be extended shortly by four positions (one recording) undergoing repair by the S.E.T. The mechanics at the exchange did not save from what source the four boards were obtained.

(e) Capt. Bridgeman stated that both the State and the S.E.T. could get transport from the Naples ~~area~~ Office transport if they were prepared to pay for it. He understood they were not prepared to pay the standard price. Major Miles told him that if he is absolutely stuck he will lend him a few vehicles, but Capt. Bridgeman said (to me) he would not be stuck if the Office transport vehicles were hired.

A few other minor points were cleared up.

H.T.M. Miller
Lt. Colonel

1982

HTWL/epc

T.36/C.S.

13

HEADQUARTERS
ALLIED COMMISSION
AFO 394
Communications Sub-Commission
Tel: 489081 Ext:555

28th November, 1944

In reply
refer to: 4/23/ /CS

Subject : Specification for CB Exchanges.

To : Under-Secretary of State for PP.TT.

1. Two copies of the specification for Italian
CB exchange switchboards are enclosed, in the form agreed
with your engineer.

2. The method of placing the order will be communicated
later.

J.L. HENDERSON
Colonel
Director.

Incls: 2 copies of Specification.

1981

File

0403

T.36/CS

HTW/epc

12-1

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489081 Ext: 555

26th November, 1944

In reply
refer to: 4/23/ /CS

Subject : Specification for CB Exchange.

To : C.S.O., L. of C., South.

A copy of the Italian specification for CB exchange switchboards is enclosed (in English and Italian), following on the A.C.HQ. meeting with Major Taylor.

J.L.H.
✓ J.L. HENDERSON
Colonel
Director.

Encl: 1 Specification in English
" " " Italian

Copy to: C.S.O., AFHQ (Att: ET. Col. Beck - with Spec. in English.
C.S.O., L. of C. - " " " "

1880

File

HTWM/epc

Specification

for

Telephone Switchboards, 24 Volts Common Battery Type, for Local Use

1. General: All switchboards ordered under this specification will be supplied in sections, each section consisting of two operator's positions. The face of the section will contain five jack panels. The framework and woodwork of sections, and individual items of equipment will be of the same type for all switchboards in order that they may be interchangeable. Quantities of equipment will differ as specified below.

No frame, rack, etc, will exceed 8 ft. 6 inches in height.

2. Key Shelf Equipment: The key shelf will be supplied with 17 double ended cord circuits, each with full circuit equipment including transmission bridge. Each cord circuit will include a two position key with locking position for listening and non-locking for ringing, and double supervisory lamps.

3. Face Equipment

(a) Multiple:

Switchboard sections will be provided for the following switchboards, and with the multiples stated. Full circuit equipment (lamps, relays, etc.) will be provided for all lines in the multiple.

One switchboard of 8 Sections (16 positions) with multiple of 2240 subscriber's lines.

Two switchboards of 5 Sections (10 positions) with multiple of 1400 subscriber's lines.

Three switchboards of 3 Sections (6 positions) with multiple of 840 subscriber's lines.

In all cases the multiple appearance will be complete on each section (i.e. in the completed switchboard it will be repeated every 5 panels), to be built up of strips of 20 jacks. The engaged test will consist of a tone on the sleeve of the jack.

The wiring of the multiple will be completely formed, but it will not be soldered to the jacks, but supplied loose and ready for soldering in position.

(b) Junction multiple:

Junction multiple as follows will have a complete appearance on each section. Full circuit equipment will be provided for all lines in the junction multiple. The multiple wiring will be supplied as in (a) above.

1879

- 2 -

Size of Switchboard	No. of Bothway Junctions in multiple connecting with:		
	CB exchanges	Automatic Exchanges	Magneto Exchanges
8 Sections	40	20	20
5 "	40	20	20
3 "	20	20	10

Each automatic exchange junction circuit or magneto exchange junction circuit will be provided with a calling lamp and an engaged lamp. Other junction circuits will be supplied with a calling lamp, and with an engaged test, consisting of a tone, on the sleeve of the jack.

4. Miscellaneous Equipment:

- (a) A cord test circuit will be provided per section.
- (b) A hand generator will be fitted on each position for use if necessary when the mains supply fails, to reduce the battery load.
- (c) Operator's head sets will be provided on the basis of three per position (in order to allow individual head sets for operators).

5. Main Distribution Frame:

A frame, complete with jumper rings, will be provided with each switchboard, equipped on the line side with sufficient protector, heat coil and fuse units to accommodate a number of lines 50% greater than the multiple capacity of the associated switchboard, and equipped on the exchange side with sufficient terminations to accommodate a number of circuits 20% greater than the multiple capacity of the associated switchboard.

6. Ringling Machines:

Two ringing machines with controls will be provided with each switchboard, one to act as a stand by machine while the other is in use, the necessary changeover switch being fitted. The output should be 75 to 100 volts at approximately 20 cycles, one transformer per two machines being fitted where necessary to raise the voltage to this figure. The necessary engaged tone supply will be provided.

7. Power Plant: The power plant will not be supplied under this specification.

1878

8. Supply of Materials:

It is understood that the construction of these switchboards will depend on the supply by the Allied Military authorities of those materials which are not available from Italian sources.

- 3 -

9. Circuit Diagrams and Construction Drawings:

All circuits diagrams and construction drawings will be made available to the Italian Government for inspection before and during the course of manufacture. Three copies of each circuit diagram will be supplied with every switchboard.

1877

(Copy).

HTWM/as.

SPECIFICAZIONE

per Tavoli di commutazione telefonica, a Batteria Central a
24 Volts, per uso locale.

1. GENERALI: tutti i tavoli di commutazione ordinati sotto questa specificazione saranno forniti in tavole, ogni tavola formata da due posti di operatrice. La parte anteriore della tavola conterrà 5 pannelli di jack. L'intelaiatura metallica e la parte in legno dei tavoli e le singole parti dell'equipaggiamento saranno dello stesso tipo per tutti i tavoli di commutazione, così da poter essere intercambiabili. Le quantità dell'equipaggiamento si differenzieranno come successivamente specificato. Nessuna permutatore, telaio, ecc., supererà i 259 cm. di altezza.

2. Apparecchiatura della piastra delle chiavi. La piastra delle chiavi sarà fornita di 17 circuiti a cordoni a due spine, ciascuno con una completa apparecchiatura di circuito includente un ponte di trasmissione. Ciascun circuito a cordoni comprenderà una sola chiave a due posti di lavoro con una stabile per l'inclusione ed una instabile per la chiamata e doppia lampadina di sorveglianza.

Ogni posto di lavoro sarà equipaggiato con una chiave comune di sezionamento ad ascolto, e un'altra di richiamata. Un disco combinatore sarà collocato per ogni posto di lavoro.

3. Apparecchiatura della Parte Anteriore.

a) Multiplo.

Le tavole saranno provvedute per i seguenti centralini e con i multipli stabiliti. L'intero equipaggiamento di circuito (lampadine, relé ecc.) saranno provveduti per tutte le linee in multiplo.

Un centralino di 8 tavoli (16 posti di lavoro) con multiplo di 2240 di abbonati.

Due centralini di 5 tavoli (10 posti di lavoro) con multiplo di 1400 linee di abbonati.

Tre centralini di 3 tavoli (6 posti di lavoro) con multiplo di 840 linee di abbonati.

In ogni caso il multiplo sarà completo in ciascun tavolo (per esempio nel centralino completato esso sarà ripetuto ogni 5 pannelli), da formarsi con strisce di 20 jacks. La prova d'occupato consisterà di un tono nella boccia della presa.

Il cablaggio del multiplo sarà completamente formato, ma non verrà saldato ai jacks, ma fornito sciolto e pronto per saldare in posizione.

b) Multiplo di giunzione.

Il multiplo di giunzione come segue avrà una presenza completa in ciascuna tavola. L'intera appa-

-2-

recchiatura di circuito verrà provveduta per tutte le linee nel multiplo di giunzione. Il cablaggio del multiplo sarà fornito come dal precedente paragrafo a).

Misura di Centralino	Numero delle giunzioni utilizzabili in due sensi in multiplo in connessione con:		
	Centrali CB	Centrali Autom.	Centrali BL.
8 tavoli	40	20	20
5 "	40	20	20
3 "	20	20	10

Ogni giunzione con centrale automatica e centrale BL, sarà provvisto di una lampada di chiamata e di una lampada di occupato. Le altre giunzioni saranno fornite solo di una lampada di chiamata e di una prova di occupato consistente di un tono nella boccia della presa.

4. Apparecchiatura Mista.

- Un circuito di prova a cordoni sarà provveduto per ogni tavolo.
- Un generatore a mano sarà collocato in ciascun posto di lavoro, per usarlo se necessario quando vien meno la corrente sulla rete per ridurre la scarica di batteria.
- I microtelefoni a pettorale per le operatrici verranno prrovveduti sulla base di tre per posto di lavoro (così da concedere alcuni microtelefoni individuali per le operatrici).

5. Permutatori.

Un permutatore completo con anelli a giarrettiera equipaggiato sul lato della linea con un sufficiente protettore contro le sovracorrenti, bobina termica e valvole fusibili per equipaggiare un numero di linee superiore del 50% alla capacità del centralino associato, ed equipaggiato sul lato della centrale con sufficienti strisce per equipaggiare un numero di circuiti superiore del 20% alla capacità del centralino associato?

6. Macchine di chiamata.

Due macchine di chiamata con comandi saranno provvisti per ciascun centralino, una per funzionare come macchina di riserva, mentre l'altra é in uso con commutatore di corrente. L'erogazione dovrebbe essere da 75 a 100 Volts ad

= 3 =

approssimativamente 20 periodi, essendo adattato un trasformatore per due macchine, dove é necessario aumentare il voltaggio a questo valore. La necessaria fornitura del tono d'occupato verrà provveduta.

7. Impianti di energia. Non verrà fornito l'impianto di energia.

8. Fornitura di materiali. E' evidente che la costruzione di questi centralini dipenderà dalla fornitura da parte delle autorità militari alleate di quei materiali che non sono disponibili tra le risorse italiane.

9. Diagrammi di circuito e disegni di costruzione.

Tutti i diagrammi di circuito e disegni di costruzione saranno posti a disposizione del Governo Italiano prima e durante il corso dell'esecuzione del lavoro. Tre copie di ciascun diagramma di circuito verranno fornite insieme ad ogni centralino.

1874

SUBJECT : Communication for Military Govt
in Northern Italy

Adv Headquarters,
Allied Armies in Italy.

Tel: Adv Filpot 38.

Communications Sub-Commission,
Headquarters Allied Commission.

Copy to : CSO L of C (ITALY)

This is in reply to your letter 4/23/CS of 11 Nov 44.

1. A combined-user project for the restoration of the underground cable system in Northern Italy is now under preparation by CSO L of C (ITALY).

2. The scope of the project has been based on the scale of communications required (including the requirements of the Allied Commission on behalf of Military Government) and on the availability of stores. The cable sizes and scale of circuit provision will be substantially as shown in Cable Engineering Instruction No. 28 of No. 1 UG Cable Coy, a copy of which you hold, except that where damage is less than anticipated, it may be possible to increase the scale by the utilisation of civil equipment recovered in situ.

3. It is not intended that military equipment utilised in the restoration of the underground cable system to the scale of the project will be recovered except the items mentioned in para 3 or where a re-distribution of recovered civil equipment permits.

4. It is understood that an AFHQ Signal Instruction is about to be issued dealing with the subject of the transfer of military communication equipment left in situ.

5. Certain items of military equipment are in short supply and expedients have been resorted to, in order that a working installation might be effected. It is desirable that Allied Commission take provision action in respect of the following:-

(a) 24v and 130v Power Plants to the extent of 15 stations or such proportion as it is estimated will be damaged by enemy action.

Each power plant is assumed to comprise charge/discharge battery installations and the means of charging from an AC supply. Prime-mover alternator sets need not be included.

(b) Toll Test Boards to the extent of 15 stations or a proportion thereof to permit of:-

- (i) DC Tests and Fault Localisation
- (ii) AC Transmission Tests
- (iii) Jack Field Facilities

To make up for the deficiency of built Toll Test Boards, our practice heretofore has been to provide these items as follows:-

1873

This is in reply to your letter 4/23/CS of 11 Nov 44.

1. A combined-user project for the restoration of the underground cable system in Northern Italy is now under preparation by CSO L of C (ITALY).
2. The scope of the project has been based on the scale of communications required (including the requirements of the Allied Commission on behalf of Military Government) and on the availability of stores. The cable sizes and scale of circuit provision will be substantially as shown in Cable Engineering Instruction No. 28 of No. 1 UC Cable Coy, a copy of which you hold, except that where damage is less than anticipated, it may be possible to increase the scale by the utilisation of civil equipment recovered in situ.
3. It is not intended that military equipment utilised in the restoration of the underground cable system to the scale of the project will be recovered except the items mentioned in para 3 or where a re-distribution of recovered civil equipment permits.
4. It is understood that an AFHQ Signal Instruction is about to be issued dealing with the subject of the transfer of military communication equipment left in situ.
5. Certain items of military equipment are in short supply and expedients have been resorted to, in order that a working installation might be effected. It is desirable that Allied Commission take provision action in respect of the following:-

(a) 24v and 130v Power Plants to the extent of 15 stations or such proportion as it is estimated will be damaged by enemy action.

Each power plant is assumed to comprise charge/discharge battery installations and the means of charging from an AC supply. Prime-mover alternator sets need not be included.

(b) Toll Test Boards to the extent of 15 stations or a proportion thereof to permit of:-

- (i) DC Tests and Fault Localisation
- (ii) AC Transmission Tests
- (iii) Jack Field Facilities

To make up for the deficiency of built Toll Test Boards, our practice heretofore has been to provide these items as follows:-

- (i) By the provision at stations of 1 Resistance Tester No. 3 and 1 Tester I-49 alternately.
- (ii) The only source of provision of this item is the US Signal Corps 'Packaged VF Test Equipment' type X-61821-C.
- (iii) From miscellaneous sources.

These items could therefore be quoted in lieu of the complete test boards.

C : Jmc.

W. W. W. W.
Major-General,
Chief Signal Officer.

HTW/epc

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489081 Ext: 555

4th December, 1944

In reply
refer to: T.36. .OS

Subject : Telecommunications Plant - N. Italy.

To : Requisition Division, A.C.

Reference Your Requisition 1-SIG-Reg. IV-44 of 30th
May as modified by Economic Section Memo. No. RD-413.4
of 16th June, to G-5, AFHQ.
(Above Requisition was reprinted by AFHQ as WGS-184
-SIG (LAC Airgram 39)).

1. AFHQ (G-5) has been informed by the Combined Board,
Washington that it is not possible to obtain the items on the above
requisition within about a year, and therefore that the items should
be substituted as far as possible by military items.

2. As a result of the above information, the matter was
discussed with G-5 (Economic and Supply) and C.S.O., AFHQ. Following
on the discussion, the attached letter, and revised list of plant
have been prepared.

3. Would you please forward the letter and your revised
requisition to AFHQ - G-5 (Economics and Supply) with copy to C.S.O.,
AFHQ; C.S.O., A.A.I.; C.S.O., L.of C; and C.S.O., L.of C. South.
It is requested by AFHQ that the matter be treated as urgent.

J.L.HENDERSON
Colonel,
Director.

Incls: 1- Copy AFHQ letter no 273923 of 22 Nov.
1-letter (draft)
1-list of plant (draft)

1872

File T.36 CS

File

HTWE/epc

D R A F T LETTER

Subject: Telecommunications - N. Italy. Reqn. 103-134-B10(LAC Airgram 39)

To: A.F.H.Q. - G-5 (Economic and Supply Division)

Reference your S-19 of 18th Oct.

1. General: As a result of a meeting of officers from your Division, from C.S.O.'s office (ARHQ), and from the Communications Sub-Commission of this HQ. on Friday, 1st December, at ARHQ., your requisition referred to above should be cancelled and replaced by the attached requisition. As mentioned at the meeting, these requirements will no doubt be referred to C.S.O., L.of C. for treatment as a military project.

Certain items of plant shown on your requisition have been excluded from the new list for the reasons given below:

2. Line Plant:

(a) At the time of preparation of the original requisition, it was the military intention to withdraw standard equipment as the Armies moved forward, replacements to be made from commercial equipment supplied via Allied Commission channels. Since non-military types of equipment were involved, it was reasonable for this HQ. to prepare the necessary demands.

(b) Now that a supply of military standard line equipment for civil needs is contemplated, it is obviously unnecessary to remove military equipment installed by A.A.I. since it would be substituted by identical equipment.

(c) Some time ago, this HQ. supplied C.S.O., A.A.I. with a statement of the minimum circuit requirements for N. Italy to permit A.M.G. or the Italian Government to function satisfactorily.

1871

It will be observed from the attached copy of a memo. from C.S.O., A.A.I. (No. 2739X3 of 22nd Nov.) that the military project includes

0414

from C.S.O.'s office (AFHQ), and from the Communications Sub-Commission of this HQ. on Friday, 1st December, at AFHQ. Your requisition referred to above should be cancelled and replaced by the attached requisition. As mentioned at the meeting, these requirements will no doubt be referred to C.S.O., L.of C. for treatment as a military project.

Certain items of plant shown on your requisition have been excluded from the new list for the reasons given below:

2. Line Plant:

(a) At the time of preparation of the original requisition, it was the military intention to withdraw standard equipment as the armies moved forward, replacements to be made from commercial equipment supplied via Allied Commission channels. Since non-military types of equipment were involved, it was reasonable for this HQ. to prepare the necessary demands.

(b) Now that a supply of military standard line equipment for civil needs is contemplated, it is obviously unnecessary to remove military equipment installed by A.A.I. since it would be substituted by identical equipment.

(c) Some time ago, this HQ. supplied C.S.O., A.A.I. with a statement of the minimum circuit requirements for U. Italy to permit A.M.G. or the Italian Government to function satisfactorily.

1871

It will be observed from the attached copy of a Memo. from C.S.O., A.A.I. (No. 2739X of 22nd Nov.) that the military project includes provision for these requirements, and that the military equipment will not be recovered ultimately except in certain instances.

Accordingly, repeater and ringing equipments and a few associated items have been excluded from the new requisition.

3. Exchange Plant:

(a) Certain toll type switchboards have been found in stores depots in N. Italy, and others have been recovered from damaged exchanges. Ten positions can be repaired and used for L.D. working in place of ten of the toll boards listed in your LAC Airgram 39.

(b) S.O.S. Matouss placed an order with the F.A.F.M.E. factory of Rome for 92 exchange switchboards, of which only a proportion is required for military use. Certain essential materials are required from Allied sources before the boards can be manufactured.

It is believed by officers of C.S.C., AFH., and C.S.O., L.of. C., that, instead of completing most of the 92 positions, the F.A.F.M.E. Coy could build in reasonable time 54 local CB and 20 toll positions to new specifications for the use of A.C. and the Italian Government, which represents the balance of the positions ordered on LAC Airgram 39.

(c) Accordingly assuming P.B.S. will supply certain essential materials for the construction of these boards, these have been excluded from the new requisition, and they will now be made locally

(d) Ringing machines have been found in Rome and they have also been omitted from the new requisition.

(e) It will be observed from the new specification that reference is made to the manufacture of storage batteries in Italy. Success depends as in the case of switchboards, on continued military assistance being essential. given to the Coy. concerned in the provision of certain materials.

(Copy)

SUBJECT : Communication for Military Govt
in Northern Italy.

22 NOV 44.

Adv Headquarters,
Allied Armies in Italy.

Tel: Adv Kilpot 38

2739X3

Communications Sub-Commission,
Headquarters Allied Commission.

Copy to : CSO L of C (ITALY)

This is in reply to your letter 4/23/OS of 11 Nov 44.

1. A combined user project for the restoration of the underground cable system in Northern Italy is now under preparation by CSO L of C (ITALY).
2. The scope of the project has been based on the scale of communications required (including the requirements of the Allied Commission on behalf of Military Government) and on the availability of stores. The cable sizes and scale of circuit provisions will be substantially as shown in Cable Engineering Instruction No. 28 of No. 1 UG Cable Coy, a copy of which you hold, except that where damage is less than anticipated, it may be possible to increase the scale by the utilisation of civil equipment recovered in situ.

3. It is not intended that military equipment utilised in the restoration of the underground cable system to the scale of the project will be recovered except the items mentioned in para 5 or where a re-distribution of recovered civil equipment permits.

4. It is understood that an AFHQ Signal Instruction is about to be issued dealing with the subject of the transfer of military communication equipment left in situ.

5. Certain items of military equipment are in short supply and expedients have been restored to, in order that a working installation might be effected. It is desirable that Allied Commission take provision action in respect of the following:-

(a) 24v and 130v Power Plants to extend to 15 stations or such proportion as it is estimated will be damaged by enemy action. Each power plant is assumed to comprise charge/discharge battery installations and means of charging from an AC supply. Prime-mover alternator sets need not be included.

Copy to : CSO L of C (ITALY)

This is in reply to your letter 4/23/CS of 11 Nov 44.

1. A combined user project for the restoration of the underground cable system in Northern Italy is now under preparation by CSO L of C (ITALY).
2. The scope of the project has been based on the scale of communications required (including the requirements of the Allied Commission on behalf of Military Government) and on the availability of stores. The cable sizes and scale of circuit provisions will be substantially as shown in Cable Engineering Instruction No. 28 of No. 1 UG Cable Coy, a copy of which you hold, except that where damage is less than anticipated, it may be possible to increase the scale by the utilisation of civil equipment recovered in situ.

3. It is not intended that military equipment utilised in the restoration of the underground cable system to the scale of the project will be recovered except the items mentioned in para 5 or where a re-distribution of recovered civil equipment permits.

4. It is understood that an AFHQ Signal Instruction is about to be issued dealing with the subject of the transfer of military communication equipment left in situ.

5. Certain items of military equipment are in short supply and expedients have been restored to, in order that a working installation might be effected. It is desirable that Allied Commission take provision action in respect of the following:-

(a) 24v and 130v Power Plants to extend ~~to~~ 15 stations or such proportion as it is estimated will be damaged by enemy action. Each power plant is assumed to comprise charge/discharge battery installations and means of charging from an AC supply. Prime-mover alternator sets need not be included.

(b) Toll Test Boards to the extent of 15 stations or a proportion thereof to permit of:-

- (i) DC Tests and Fault Localisation
- (ii) AC Transmission Tests.
- (iii) Jack Field Facilities.

To make up for the deficiency of built Toll Test Boards, our practice heretofore has been to provide these items as follows:-

= 2 =

- (i) By the provision at of 1 Resistance Tester No.3 and 1 Tester I-49 alternately.
- (ii) The only source of provision of this item is the US Signal Corps 'Packaged VF Test Equipment type X-61821-C.
- (iii) From miscellaneous sources.

These items could therefore be quoted in lieu of the complete test boards.

Major - General,
Chief Signal Officer.

C : Jmc.

1969

DRAFT SPECIFICATIONS

Delivery:

Ship to: NAPLES consigned to Communications Sub-Commission,
Allied Commission, with delivery of all items as soon as possible.

1. Item No.	2. Designation or Number.	3. Article	4. Unit	5. Required
1.	Bridge Megger	Bridge Megger for battery operation each		2
2.	TMS 12A or 13 A.	Transmission measuring sets, portable "		3
3.	Oscillator 19 C	Oscillators, for item 2.	"	3
4.	Attenuator 5 A	Attenuators	"	3
5.	EE 70 or EE 65	Test Case, with equipment	"	22
6.	TE 47	Maintenance Set Tools, for telephone Exchanges	"	18
7.	Solder M31 (US) or No. 6 (UK)	Solder Tin-Lead wire, resin core for internal connections	lbs.	12000
8.	Solder M33 (US) or No. 8 (UK).	Solder, Tin-Lead, Solid for plumbing underground cable joints, together with sufficient splicing material (less lead sleeves) for 1500 splices	"	12000
9.	As in Col. 3	Sleeve, jointing, paper or cotton for local type underground cables - miscellaneous sizes	"	100,000
10.	As in col. 3.	Packaged VF Test Equipment type X-61321-c of U.S. Sig. Corps.		15
11.	As in Col. 3.	Testers I-49	"	3
12.	As in Col. 3.	Resistance Testers No. 1	"	7
13.	As in col. 3.	Wire, ^{Cadmium} ~~solid~~ in copper - 70lbs per mile single conductor, bare, solid; or wire copper 150 lbs or 143 lbs.	ft.	5,280,000
14.	As in col. 3.	Cable Switchboard, 20 pairs		61,000

1867

1. Item No.	2. Designation or Number.	3. Article	Unit	Required
1.	Bridge Megger	<u>Bridge Megger for battery operation each</u>		2
2.	TES 12A or 13 A.	<u>Transmission measuring sets, portable "</u>		8
3.	Oscillator 19 C	<u>Oscillators, for item 2.</u>		8
4.	Attenuator 5 A	<u>Attenuators</u>		8
5.	BE 7C or EE 65	<u>Test Case, with equipment</u>		22
6.	TE 47	<u>Maintenance Set Tools, for telephone Exchanges</u>		18
7.	Solder #31 (US) or No.6 (UK)	<u>Solder Tin-Lead wire, resin core for internal connections</u>	lbs.	12000
8.	Solder #33 (US) or No.8 (UK).	<u>Solder, Tin-Lead, Solid for plumbing underground cable joints, together with sufficient splicing material (less lead sleeves) for 1500 splices</u>	"	12000
9.	As in Col. 3	<u>Sleeve, jointing, paper or cotton for local type underground cables - miscellaneous sizes</u>	"	100,000
10.	As in col. 3.	<u>Packaged VF Test Equipment type X-61821-C of U.S. Sig. Corps.</u>		15
11.	As in Col. 3.	<u>Testers I-49</u>	"	8
12.	As in Col. 3.	<u>Resistance Testers No. 1</u>	"	7
13.	As in col. 3.	<u>Wire, ^{Cadmium} ~~Cadmium~~ copper - 70 lbs per mile single conductor, bare, solid; or wire copper 150 lbs or 173 lbs.</u>	ft.	5,280,000
14.	As in col. 3.	<u>Cable Switchboard, 20 pairs</u>		61,000
15.	As in col. 3.	<u>Cable Switchboard, 10 pairs.</u>	"	36,000
16.	As in col. 3.	<u>Wire lumbar, cross-connecting</u>	"	24,200
17.	As in col. 3.	<u>Avometers or AC/DC Voltmeters</u>	Each	2

1867

- 2 -

1. Item No.	2. Designation or Number	3. Article	4. Unit	5. Required
18.	None	Battery, storage, 24 volts for valve filament supply - 1200 amp.hrs. capacity-Each		8
19.	None	As above but of - 800 " " "		8
20.	None	As above but of - 600 " " "		14
21.	None	Battery, storage, 130 volts for valve plate supply. - 400 amps.hrs. capacity		8
22.	None	As above but of - 300 " " "		8
23.	None	As above but of - 200 " " "		14
24.	None	Battery, storage, 24 volts for operation of CB exchanges - 1000 amp.hrs capacity		2
25.	None	As above but of - 800 " " "		4
26.	None	As above but of - 600 " " "		6
27.	None Note jc	Motor Generator consisting of electric motor driving two generators. Mains supply and output as stated below:		15

Number of Sets	Voltage of Supply	Cycles of Supply and phases	OUTPUT OF GENERATORS		
			Filament supply	Plate supply	
3	220	50	190	60	170
1	220	42	190	60	170
1	160	42	190	40	110
1	350	42	190	40	110
2	260	42	190	40	80
6	220	42	190	30	80
1	220	50	190	30	80

28. None Note
jc

Engine Generator consisting of petrol or paraffin
driven engine coupled to one generator. Output
to be as follows:

Each 6

1866

20. None) As above but of - 600
21. None) Battery, storage, 110 volts for valve
(See Note) plate supply. - 400 amps. hrs. capacity " 3
22. None) As above but of - 300 " " " 3
23. None) As above but of - 200 " " " 14
24. None) Battery, Storage, 24 volts for operation of
(See Note) CB exchanges - 1000 amp. hrs. capacity " 2
25. None) As above but of - 400 " " " 4
26. None) As above but of - 600 " " " 6
27. None Note 3c) Motor Generator consisting of electric
motor driving two generators. Mains supply " 15
and output as stated below:

Number of Sets	Voltage of Supply	Cycles of Supply and phase	OUTPUT OF GENERATORS		
			Filament supply	Plate supply	
			Volts	Amps	Volts
3	220	50	190	60	170
1	220	42	190	60	170
1	160	42	190	40	110
1	350	42	190	40	110
2	260	42	190	40	110
6	220	42	190	30	80
1	220	50	190	30	80

28. None Note 3c) Engine Generator consisting of petrol or paraffin
driven engine coupled to one generator. Output
to be as follows: Each 6

Number of Sets	Output	
	Volts	Amps.
1	35	140
2	35	110
3	35	80

29. 78-9329.2 Truck, Cargo, Body 1 1/2 tons, 4x4, 2-DT Each 100
30. UK-15 Gwt Truck, Cargo Body 15 GWT. " 50

1866

Justification:

1. This requisition provides for the minimum local and long distance telephone service necessary in N. Italy to deal with political unrest and other similar difficulties which would probably affect military operations.

2. Items 1 to 17 above are military standard items. The other items are larger than the usual military sizes due to the fact that service even on a skeleton basis, in the big cities, necessarily requires equipment of greater power than that needed by a military HQ.

3. The following comments are made with reference to specific items on the requisition.

(a) Items 1, 2, 3, 4, 5, 6, 10, 11, 12, 17. The country has been stripped of testing equipment and tools by the Germans. Most of the transmission equipment listed is to partly re-equip fifteen of the 23 repeater stations serving the main operational cables N. of Rome. The remainder is to provide a small amount of portable equipment for stations south of Rome.

The test sets and tools are for the maintenance of exchanges N. of Florence, to replace items likely to be removed by the enemy.

(b) Items 7 and 8: There is no solder left in the country south of the front line, and very little has been found since the enemy withdrew. There is no tin available.

Accordingly the need of solder is vital and installation and repair work at the moment depends entirely on military supplies.

(c) Items 18 to 28:

(1) Six local type exchange switchboards will shortly be manufactured in Rome. It is intended that they should ~~1865~~ to provide a skeleton service in the bigger cities of N. Italy in the event of destruction of or serious damage to the existing telephone system. They have been allocated in the first place as follows:

E. Items 1 to 17 above are larger than the usual military sizes due to the fact that service even on a skeleton basis, in the big cities, necessarily requires equipment of greater power than that needed by a military HQ.

3. The following comments are made with reference to specific items on the requisition.

(a) Items 1, 2, 3, 4, 5, 6, 10, 11, 12, 17. The country has been stripped of testing equipment and tools by the Germans. Most of the transmission equipment listed is to partly re-equip fifteen of the 23 resister stations serving the main operational cables N. of Rome. The remainder is to provide a small amount of portable equipment for stations south of Rome.

The test sets and tools are for the maintenance of exchanges N. of Florence, to replace items likely to be removed by the enemy.

(b) Items 7 and 8: There is no solder left in the country south of the front line, and very little has been found since the enemy withdrew. There is no tin available.

Accordingly the need of solder is vital and installation and repair work at the moment depends entirely on military supplies.

(c) Items 18 to 25:

(1) Six local type exchange switchboards will shortly be manufactured in Rome. It is intended that they should ~~1865~~ to provide a skeleton service in the bigger cities of N. Italy in the event of destruction of or serious damage to the existing telephone exchanges, and they have been allocated in the first place as follows:

16 positions	Milano
10 positions	Genova
10 "	Torino
6 "	Bologna
6 "	Venezia
6 "	Trieste

- 4 -

(II) It will be necessary to provide batteries and charging plant for the above, (but not ringing machines which are available). This power plant is listed in items 24 to 26, and 28.

(III) C.S.O., A.A.I. will instal military repeater and associated equipment for civil use in N. Italy but he is unable to provide the necessary batteries and mains driven charging plant for 15 out of about 23 operational repeater stations north of Rome. These are specified in items 18 to 23, and 27.

(IV) C.S.O., AFHQ. expects that storage batteries will shortly be made locally with assistance from P.B.S. and that the above batteries can therefore be manufactured in Italy. This/no doubt be confirmed.

These batteries are not standard military items. The 350 amp.hrs. batteries in R. Signals use could be used instead of items 21 to 23.

(V) In item 27, the output current has been calculated roughly on a 7 hour charging rate. This rate is not essential, and if machines are more readily available for charging at any rates between the 7 hours and (say) the 12 hours rates, they would be acceptable.

A suitable build-up of rectifiers would be accepted instead of motor generators, and would be preferable in many cases due to the wider range of voltage and cycles likely to be covered by the rectifiers (VI) There are no known military ^{equivalents} ~~equipments~~ for plant shown under item 28. There are several combinations of plant that might be supplied should the engine generators specified be in short supply e.g. a standard engine generator supplying say 220 volts could be used in conjunction with (say) a pair of 30 amp. rectifiers on a float scheme.

As in (V) an output based on the 7 hours rate is not essential

(VII) It is understood that power plant of somewhat similar specification to the plant in items 27 and 28, although not on military standard lists, is obtainable via military channels for ¹⁶⁶⁴ military projects. The C.S.O., A.F.H.Q. would probably therefore be able to assist

23 operational repeater stations north of Rome. These are specified in items 18 to 23, and 27.

(IV) C.S.O., ARHQ, expects that storage batteries will shortly be made locally with assistance from F.B.S. and that the above batteries can therefore be manufactured in Italy. This/no doubt be confirmed. These batteries are not standard military items. The 350 amp.hrs. batteries in R.Signals use could be used instead of items 21 to 23.

(V) In item 27, the output current has been calculated roughly on a 7 hour charging rate. This rate is not essential, and if machines are more readily available for charging at any rates between the 7 hours and (say) the 12 hours rates, they would be acceptable.

A suitable build-up of rectifiers would be accepted instead of motor generators, and would be preferable in many cases due to the wider range of voltage and cycles likely to be covered by the rectifiers ^{equivalents} ~~equipment~~ for plants shown under

(VI) There are no known military ~~equipment~~ ^{equivalents} for plants that might be supplied in item 23. There are several combinations of plant that might be supplied should the engine generators specified be in short supply e.g. a standard engine generator supplying say 220 volts could be used in conjunction with (say) a pair of 30 amp. rectifiers on a float scheme.

As in (V) an output based on the 7 hours rate is not essential

(VII) It is understood that power plant of somewhat similar specification to the plant in items 27 and 28, although not on military standard lists, is obtainable via military channels for military projects. The C.S.O., A.F.H.Q. would probably therefore be able to assist in the early provision of such plant.

(e) Items 29 and 30

There are only a few trucks in poor condition available for maintenance and repair of Italian Telecommunications plant. Some have been lent by Military HQ's for the maintenance of entirely military communications, but there are not even sufficient for this purpose.

Many military lines are maintained by Italian staff.

The plant is steadily deteriorating through storms, theft, and lack of maintenance work.

It seems probable that the Italians will be asked to maintain a fair number of military lines in N. Italy, and this will not be possible without the provision of vehicles.

(d) Items 14, 15, and 16:

These are required:

(I) for the installation of the switchboard mentioned in para. 3C(I) above and (II) for the installation of small switchboards in towns not included in the list under para 3 C(I).

SECRET

ALLIED FORCE HEADQUARTERS
Office of the Chief Signal Officer

WIR/EEU/os
AFG 512, U. S. Army
29 November 1944

AFHQ/9

SUBJECT: Switchboard Requirements North of Leghorn-Florence-Ancona Line.

TO : Chief Signal Officer, L of C, Italy.

1. Reference is made to your letter, subject as above, file X/21/30, dated 29 October 1944, and to your message on the same subject, file SX337, dated 19 November 1944, from CSO, L of C, Italy to CSO, AFHQ.

2. The switchboard plan is satisfactory insofar as Military LD switchboards are concerned, and proposed provision details are indicated on the inclosed Tabulation "A". Issue of a supplement to AFHQ/9 to cover additional authorizations and transfer of the NAPLES board is being held pending final arrangements on the FATME contract.

George I. Back
GEORGE I. BACK,
Colonel, Signal Corps,
Deputy Chief Signal Officer

L. B. Nichols
L. B. NICHOLS,
Major General,
Chief Signal Officer.

Incl:
Tabulation "A".

Copy to:
CSO, AAI
Director of Comm. Sub-Commission, A.C.
CSO, L of C South Italy
CSO, Adv. AAI (Col. HORN)
Adv. Telecommunications Board
DOS (CRD 13) AFHQ
Wire Ofc, 3141 Sig. Serv. Grp.
Sig. Supply AFHQ
Sig. Wire AFHQ

Director	
D/Director	
Chief, Telecoms	
Chief Postal	
H. Q. Coms. O.	
Asst. Chief Postal	
Censorship	
Chief Clerk	

CROSS REF.	1862
FILE	B/rwd.
T.36/CS	

Date: 2 DEC 1944

SECRET

SECRETTabulation "A"
22 November 1944PLAN FOR PROVISION OF SWITCHBOARD REQUIREMENTS NORTH OF
LEGHORN-FLORENCE-ANCONA LINE1. Items to be provided from FATME.

- a. Two (2) 8-position civil type LD switchboards, for MILAN and TRIESTE.
- b. One (1) 6-position civil type LD switchboard for TURIN.
- c. One (1) 4-position civil type LD switchboard for LEGHORN.

Note: All switchboards are to be supplied by FATME factory in ROME in accordance with specifications now being prepared by CSO, L of C, Italy.

2. Items to be provided by transfer of existing equipment.

- a. Of the 8 positions of TC-1 requested for MILAN, only 6 positions are to be provided, by transfer from NAPLES installation. The other 2 positions of BD-80 switchboards from NAPLES are to be retained by AFHQ where they will be combined with available equipment to make a 3-position TC-1, to be held for AFHQ needs. It is felt that 6 positions will handle all initial LD requirements at MILAN.

3. Items already available under combined special projects.

- a. Two (2) PBX's required for locality exchanges at the ports of GENOA and TRIESTE are already authorized by AFHQ/8, Supplement 1, where they were originally approved for use in AAI Main but where TC-10's are being used instead. The PBX's have not been issued but issue is being arranged.
- b. One 3-position TC-10 for initial installation at TURIN, is available from the eight (8) TC-10's (3 pos. ea) authorized under AFHQ/9, Supplements 7 and 8. Six (6) of the TC-10's authorized have already been issued (for Filpot and Filpot "leap-frog"). Issue of the remaining two (2) is being arranged, one (1) for the TURIN requirement, the other for initial military LD use at GENOA as specified in the L of C, Italy plan. These issues complete the presently visualized L of C, Italy plan for use of TC-10 switchboards in Northern Italy.

1861

SECRET

TWM/epc

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489081 Ext: 555

7th December, 1944

In reply
refer to: T.36.10.CS

Subject : Switchboards for N. Italy

To : Under-Secretary of State for PP.TT.

1. With reference to the placing of a contract with F.A.T.M.E. for toll and CB local switchboards for N. Italy, the question as to who should place the contract (i.e. Allied Forces of Italian Government) has been discussed at length with Allied Officers at A.F.H.Q.

2. It has not been possible to obtain the consent of A.F.H.Q. to a military contract except in the case of those switchboards which will shortly be manufactured for military use only.

3. As you have agreed to the specifications, would you kindly therefore place a contract at once in the name of the Italian Government, with F.A.T.M.E. for the following, for civil use. The Italian Govt. is responsible for ensuring that the work is carried out.

1-16 position switchboard	)	As per specification accompanying
2-10 " "	s)	A.C. letter No. 4/25/ /CS of 28th
3 - 6 " "	s)	Nov, 1944.
1- 8 " "	)	As per specification accompanying A.C.
2- 6 " "	s)	letter No. 4/25/70/Cs of 22 Nov. 1944

4. Assistance will be given with the provision of certain essential materials required in the manufacture of the Switchboards, as supplied for similar plant in course of construction at present in the F.A.T.M.E. factory.

5. It is suggested that completion dates be obtained as follows on the contract with F.A.T.M.E., or earlier:

1- 6 position CB Switchboard	)	End of December 1944
1-16 " "	)	End of January
1-10 " "	)	

See: 24

File

T.36.10.CS

7th Dec. 44. Continued.

1-10	position	CB Switchboard	)	
1-6	"	Toll	"	) End of February.
1-6	"	CB	"	)
2-6	"	Toll	-"	s) End of March.
1-6	"	CB	-"	)

J.L.HENDERSON
Colonel,
Director.

Incls: Two letters.

- R -

1859



MINISTERO DELLE COMUNICAZIONI
AZIENDA DI STATO PER I SERVIZI TELEFONICI

REPARTO 2^o UFFICIO 1^o

PROT. N. 29604/510 PG
ALLEGATI

ROMA

1 DIC. 1944

Mod. 9 - (A. T.)

18

La col Milan

RISPOSTA AL N.

DEL

OGGETTO: Specifica fornitura Patme, nuovi tavoli interurbani.

CROSS REFS.	
FILE	B/fwd.
T.36/CS	

U R G E N T E

In risposta alla lettera di codesta Spett. Commissione N. 4/23/10/CS del 22 novembre u.s., si comunica a codesta Commissione medesima che:

- 1) si accetta la proposta di utilizzare per uso civile, per Milano, Genova e Verona, i posti di lavoro di cui alla specifica allegata alla nota stessa;
- 2) non si richiede per ora alcuna variante all'equipaggiamento indicato nella specifica stessa.

IL SOTTOSEGRETARIO DI STATO

ALLA COMMISSIONE ALLEATA
SOTTOCOMMISSIONE
COMUNICAZIONI

- In reply to your 4/23/10/CS of November 22nd 1944, it is pointed out that:*
- 1) proposal has been accepted of making use for civil use, for Milan, Genoa, and Verona, of portions listed in specifications attached to the said note
 - 2) No alterations are for the time being required to the equipment mentioned in the ~~spec~~ specification.

HTWM/epc

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489081 Ext: 555

*Not sent
Return fr.
reference only*
26th November, 1944
*HTWM
5/12*

In reply
refer to: 4/23/ /CS

Subject : Telecommunications Requirements - Reference Requisition
No. MGS - 184 - SIG.

To : AFHQ, G-5 (Economics and Supply Division).
Reference your S-19 of 18th October, 1944.

1. General:

Major items of the required equipment can be classed roughly as (a) line plant or (b) exchange plant. In each case, the demands shown on LAC Airgram 39 must now be altered due to a change in circumstances, as shown below.

2. Line Plant:

(a) At the time of preparation of the requisition, it was the military intention to withdraw standard equipment as the Armies moved forward, replacements to be made from commercial equipment supplied via Allied Commission channels. Since non-military types of equipment were involved, it was reasonable for this HQ. to prepare the necessary demands.

(b) Now that a supply of military standard line equipment for civil needs is contemplated it is obviously unnecessary to remove military equipment installed by A.A.I. HQ. since it would be substituted by identical equipment.

(c) Some time ago, this HQ. supplied C.S.O., A.A.I. with a statement of the minimum circuit requirements for N. Italy to permit A.M.G. or the Italian Government to function satisfactorily. It will be observed from the attached copy of a Memo. from C.S.O., A.A.I. (No. 2739X3 of 22nd November.) that the military project includes provision for these requirements, and that the military equipment will not ultimately be recovered except in certain instances.

Accordingly items 14, 15, 16, 17, 20, 41, 42, 43, 44, and 47 on LAC Airgram 39 may be deleted. Remaining line plant items are dealt with later.

3. Exchange plant:

(a) Certain toll type switchboards have been found in stores depots in N. Italy, and others have been recovered from damaged exchanges. Ten positions can be repaired and used for toll

4/23/ /CS

26th Nov.44. Continued.

working in place of ten of the toll boards requisitioned on LAC Airgram 39.

(b) SOS NATOUSA placed an order with a Rome factory for 92 exchange switchboards of which only a proportion is required for military use. Certain essential materials are required from Allied sources before the boards can be manufactured.

It is believed by C.S.O., L.of C. and by Lt.Col.Beck of the office of the C.S.O., A.F.H.Q. that, instead of completing most of the 92 positions, the F.A.T.M.E. Coy could build in reasonable time 54 local CB and 20 toll positions to new specifications for the use of A.C. and the Italian Government, which represents the balance of the positions ordered on LAC Airgram 39.

Accordingly, if A.F.H.Q. be agreeable to the manufacture of the positions which would have to be started at once, the following items may be deleted from the requisition: 1, 25, 26, 27, 39, 56, 57, 58, 59, 60, and 70. It is suggested that reference be made to C.S.O. (AFHQ) for further information (Lt.Col.Beck).

(c) Several ringing machines have been found on the FATME factory and accordingly, nos. 2, 13, 31, 40, 66 and 71 may be deleted from the requisition.

4. Items Still Required:

The items remaining on LAC Airgram 39 are as follows: 3 to 12, 18, 19, 21, 22, 24, 28, 29, 30, 32 to 38, 45, 46, 46a, 48 to 55, 61 to 65, 67 to 69, 72 to 74. Notes on these items are given in the Appendix.

It is not possible for this HQ to state the standard items required since:

(a) No signal stores lists are held here.
(b) Where more than one military item is suitable, nothing is known about the comparative availabilities of these items. On the other hand, with the information supplied herewith in Appendix II, the C.S.O. AFHQ should be in a position to select standard items, where these are available, without difficulty, and his decision would be accepted.

If it is essential for this HQ. to prepare a fresh requisition this can be done at once on receipt of suggestions as to the standard items to be requisitioned.

Incls: Copy of A.A.I. letter of 22nd Nov.
" " Appendix.

J.L.HENDERSON
Colonel
Director.

Copy to: C.S.O., AFHQ. With copy of Appendix.
C.S.O., A.A.I. " " " "
C.S.O., L.of C. " " " "

1956

(Copy)

SUBJECT : Communication for Military Govt
in Northern Italy.

22 NOV 44.

Adv Headquarters,
Allied Armies in Italy.

Tel: Adv Filpot 38

2739X3

Communications Sub-Commission,
Headquarters Allied Commission.

Copy to : CSO I of C (ITALY)

This is in reply to your letter 4/23/CS of 11 Nov 44.

1. A combined user project for the restoration of the underground cable system in Northern Italy is now under preparation by CSO I of C (ITALY).
2. The scope of the project has been based on the scale of communications required (including the requirements of the Allied Commission on behalf of Military Government) and on the availability of stores. The cable sizes and scale of circuit provisions will be substantially as shown in Cable Engineering Instruction No. 28 of No. 1 UG Cable Goy, a copy of which you hold, except that where damage is less than anticipated, it may be possible to increase the scale by the utilisation of civil equipment recovered in situ.
3. It is not intended that military equipment utilised in the restoration of the underground cable system to the scale of the project will be recovered except the items mentioned in para 5 or where a re-distribution of recovered civil equipment permits.
4. It is understood that an AFHQ Signal Instruction is about to be issued dealing with the subject of the transfer of military communication equipment left in situ.
5. Certain items of military equipment are in short supply and expedients have been restored to, in order that a working installation might be effected. It is desirable that Allied Commission take provision action in respect of the following:-
 - (a) 24v and 130v Power Plants to extend of 15 stations or such proportion as it is estimated will be damaged by enemy action. Each power plant is assumed to comprise charge/discharge

Communications Sub-Commission,
Headquarters Allied Commission.

Copy to : CSO L of C (ITALY)

This is in reply to your letter 4/23/GS of 11 Nov 44.

1. A combined user project for the restoration of the underground cable system in Northern Italy is now under preparation by CSO L of C (ITALY).
2. The scope of the project has been based on the scale of communications required (including the requirements of the Allied Commission on behalf of Military Government) and on the availability of stores. The cable sizes and scale of circuit provisions will be substantially as shown in Cable Engineering Instruction No. 28 of No. 1 UG Cable Coy, a copy of which you hold, except that where damage is less than anticipated, it may be possible to increase the scale by the utilisation of civil equipment recovered in situ.

3. It is not intended that military equipment utilised in the restoration of the underground cable system to the scale of the project will be recovered except the items mentioned in para 5 or where a re-distribution of recovered civil equipment permits.

4. It is understood that an AFHQ Signal Instruction is about to be issued dealing with the subject of the transfer of military communication equipment left in situ.

5. Certain items of military equipment are in short supply and expedients have been restored to, in order that a working installation might be effected. It is desirable that Allied Commission take provision action in respect of the following:-
(a) 24v and 130v Power Plants to extend of 15 stations or such proportion as it is estimated will be damaged by enemy action. Each power plant is assumed to comprise charge/discharge battery installations and means of charging from an AC supply. Prime-mover alternator sets need not be included.

(b) Toll Test Boards to the extent of 15 stations or a proportion thereof to permit of:-

- (i) DC Tests and Fault Localisation
- (ii) AC Transmission Tests.
- (iii) Jack Field Facilities.

To make up for the deficiency of built Toll Test Boards, our practice heretofore has been to provide these items as follows:-

= 2 =

- (i) By the provision at of 1 Resistance Tester No.3 and 1 Tester I-49 alternately.
- (ii) The only source of provision of this item is the US Signal Corps 'Packaged VF Test Equipment type X-61821-C.
- (iii) From miscellaneous sources.

These items could therefore be quoted in lieu of the complete test boards.

Major - General,
Chief Signal Officer.

C : Jmc.

No on Recn	Item on Requisition.	Quantity on Recn	Remarks.
3	Bridge Megger	1	Standard item
4	Transmission measuring sets	2	do
5	Truck - 1½ tons	30	do
6	" - 15 cwt	20	do (UK)
7	Test desk or test case	1	U.S. item EE65 or EE65A would do
8	Bridge Megger	1	Standard item
9	Maintenance set (CB)	3	do
10	*Solder - resin core	1000lbs	do
11	*" - plumbing	1000lbs	do
12	Sleeves, jointing, paper	50,000	do
18	Bay, transmission	1	Replace this item by: 1 - Tester I-49 and 1 - US Sig Corps "Packaged VF Test Equipment" type X-61821-C
19	Transmission measuring set	2	Standard item.
21	Battery, filament (24V)	2	Since a capacity of about 1000 amp hours will be necessary, no standard item is known.
22	" , plate (130V)	2	A standard item of about 400 amp hrs capacity would be suitable.
23	Engine - generator (engine with 2 generators)	2	Instead of engine generators, it would now be advisable to supply motor generators or rectifiers. These should operate from a 220 volts 42 cycles supply with outputs of 140 amps at 35 volts and 60 amps at 190 volts.
24	Wire, cadmium copper	5,280,000Ft	Standard item.
28	Test case	1	As in item 7
29	Battery - 1000 amp hrs capacity.		A 24 volts battery is required. There appears to be no standard item of this capacity.
30	Engine - generator. (engine with 1 generator)	2	Output required - 140amps at 35 volts Not known whether standard item exists.
32	Cable, Switchboard, 42 wires.	10,560 Ft	Standard 20 pairs cable suitable
33	" " 63	15,840Ft	" " " "
34	Wire, jumper	10,560 ft	but 31,680 ft required instead of figure requisitioned.
35	Maintenance Set (CB)	3	Standard Item
36	*Solder - resin core	1000 lbs	do
37	*" - plumbing	1000 lbs	do
38	Sleeves, jointing, paper	50,000	do
45	Bay, transmission	6	Replace this item by following: 3 - Resistance testers No.3 3 - Testers I-49 6 - U.S. Signal Corps "Packaged VF Test Equipment" type X-61821-C Standard item (UK) 1854
46	Avometers	2	Standard item.
46a	Transmission measuring sets	4	As for item 21
48	Battery filament	3	" " 22

18	Bay, transmission				1 - Tester I-49 and 1 - US Sig Corps "Packaged VF Test Equipment" type X-61821-C
19	Transmission measuring set	2			Standard item. Since a capacity of about 1000 amp hours will be necessary, no standard item is known.
21	Battery, filament (24V)	2			A standard item of about 400 amp hrs capacity would be suitable.
22	" , plate (130V)	2			Instead of engine generators, it would now be advisable to supply motor generators or rectifiers. These should operate from a 220 volts 42 cycles supply with outputs of 140 amps at 35 volts and 60 amps at 190 volts.
23	Engine - generator (engine with 2 generators)	2			Standard item.
24	Wire, cadmium copper	5,280,000			Standard item.
28	Test case	1			As in item 7
29	Battery - 1000 amp hrs capacity.				A 24 volts battery is required. There appears to be no standard item of this capacity.
30	Engine - generator. (engine with 1 generator)	2			Output required - 140amps at 35 volts Not known whether standard item exists.
32	Cable, Switchboard, 42 wires.	10,560 Ft 15,840Ft			Standard 20 pairs cable suitable
33	" " " "				" " " " "
34	Wire, jumper	10,560 ft			but 31,680 ft required instead of figure requisitioned.
35	Maintenance Set (CB)	3			Standard Item
36	*Solder - resin core	1000 lbs			do
37	* " - plumbing	1000 lbs			do
38	Sleeves, jointing, paper	50,000			do
45	Bay, transmission	6			Replace this item by following: 3 - Resistance testers No.3 3 - Testers I-49 6 - U.S. Signal Corps "Packaged VF Test Equipment" type X-61821-C Standard item (UK)
46	Avometers	2			Standard item.
46a	Transmission measuring sets	4			
48	Battery filament	8			As for item 21
49	" , plate	8			" " 22
50	" , filament	12			Batteries of about 500 amp hrs capacity (24V) will be required. There is probably a suitable standard U.S. item.
51	" , plate	12			Batteries of 200 to 250 amp hrs capacity (130V) will be required. There is probably a suitable standard item.

1854

52	Battery, filament	16	Standard 350 amp. hrs batteries would be suitable (24V)																																																								
53	" , plate	16	Batteries of about 100-150 amp hrs capacity will be required. There is probably a suitable standard item.																																																								
54	Engine generators (each engine with two generators)	20	Instead of engine generators, motor generators or rectifiers are required as shown below. It is not known if standard items are available.																																																								
			<table><tr><th>No of Voltage sets</th><th>of Supply</th><th>Cycles of supply</th><th>Output Filament Volts</th><th>Anode Amps</th><th>V</th><th>A</th></tr><tr><td>3</td><td>220</td><td>50</td><td>35</td><td>140</td><td>190</td><td>60</td></tr><tr><td>1</td><td>220</td><td>42</td><td>35</td><td>140</td><td>190</td><td>60</td></tr><tr><td>3</td><td>260</td><td>50</td><td>35</td><td>80</td><td>190</td><td>35</td></tr><tr><td>1</td><td>160</td><td>42</td><td>35</td><td>80</td><td>190</td><td>35</td></tr><tr><td>2</td><td>220</td><td>50</td><td>35</td><td>80</td><td>190</td><td>35</td></tr><tr><td>4</td><td>220</td><td>42</td><td>35</td><td>60</td><td>190</td><td>20</td></tr><tr><td>4</td><td>220</td><td>50</td><td>35</td><td>60</td><td>190</td><td>20</td></tr></table>	No of Voltage sets	of Supply	Cycles of supply	Output Filament Volts	Anode Amps	V	A	3	220	50	35	140	190	60	1	220	42	35	140	190	60	3	260	50	35	80	190	35	1	160	42	35	80	190	35	2	220	50	35	80	190	35	4	220	42	35	60	190	20	4	220	50	35	60	190	20
No of Voltage sets	of Supply	Cycles of supply	Output Filament Volts	Anode Amps	V	A																																																					
3	220	50	35	140	190	60																																																					
1	220	42	35	140	190	60																																																					
3	260	50	35	80	190	35																																																					
1	160	42	35	80	190	35																																																					
2	220	50	35	80	190	35																																																					
4	220	42	35	60	190	20																																																					
4	220	50	35	60	190	20																																																					
55	Maintenance Set (CB)	12	Standard item																																																								
61	Battery, 800amp hrs capacity	4	Probably no standard items available																																																								
62	Battery, 600 amp hrs capacity	6	Believed to be suitable U.S. standard item.																																																								
63	Test Case	5	As in item 7																																																								
64	Engine - generators (each engine with 1 generator).	2	Required to supply 110 amps at 35 volt																																																								
65	"	4	Not known whether standard item exists																																																								
67	Cable, switchboard, 42wires	14, 560 ft	Required to give 80 amps at 35 volts.																																																								
68	" " 63 wires	19, 840 ft	Not known whether standard item exists																																																								
69	Wire, jumper.	13, 560 ft	Standard 20 pairs suitable.																																																								
72	Maintenance set	12	39, 680 ft required instead of figure requisitioned.																																																								
73	Truck - 1 1/2 tons	70	Standard item.																																																								
74	" - 15 cwt.	30	Standard item																																																								

Items 10, 11, 36 and 37

It has been found that no supplies of solder are held by Italians in liberated Italy. Tin is not obtainable for making solder. It is therefore desired that the quantities of the above items be increased to the figures shown below.

Item 10	-	6000 lbs
" 11	-	6000 lbs
" 36	-	6000 lbs
" 37	-	6000 lbs

HTWM/epc

HEADQUARTERS
ALLIED COMMISSION
APO 394
Communications Sub-Commission
Tel: 489081 Ext:555

15th November, 1944

In reply
refer to: 4/23/57/CS

Subject : Italian Carrier Telephone Equipment.

To : C.S.O., L.of C. South
Att: Major Taylor

Ref : A.C. No.CS/4/23/57 of 17th October, 1944 sent in
reply to your 413.4/9 of 10th Oct and 11th Oct.

1. The descriptive matter referred to on the above A.C.
letter has not yet been received, as the Italian Government has
supplied a discription of another type of equipment in error.

2. A discription of the latter, with diagrams, may be
of use to you, and these are enclosed accordingly.

J.L.HENDERSON
Colonel
Director.

Incls: 3 Diagrams
1-Memo in Italian
1-translation thereof.

1852

Note
These specifications were submitted
by representatives of TMO, TETI, & the State (also FATTE)
at a small meeting on 22 Nov. as
a result of a request at the meeting on
18 Nov. A modified spec. has been prepared
incorporating amendments
agreed on 21 Nov.

[Signature]

24/11/44

Tmo

(5)

SPECIFICAZIONE

delle caratteristiche delle Centrali manuali di emergenza di progetto FATME per il Gruppo STET.

1) Destinazione e capacità:

Milano	posti 16	numeri 2240
Torino	" 10	" 1400
Bologna	" 6	" 840
Venezia	" 6	" 840
Trieste	" 6	" 840

2) Sistema: BC a bicordi, 24 V.

3) Posto d'operatrice: attacco d'operatrice con 3 microtelefoni a pettorale (2 di riserva), chiavi generali di richiamata, sezionamento ed ascolto, disco combinatore, *generatore a mano di riserva.*

4) Bicordi in numero di 17 per posto, doppio segnale di fine, chiave a tre posizioni per inserzione e chiamata.

5) Jack locali in numero di 140 per posto di lavoro, ciascuno con lampada di chiamata.

6) Multiplo d'abbonato completo per ciascuna tavola (formata da due posti di lavoro abbinati) costituito da n x 140 jack semplici a 3 molle, in striscie da 20 (essendo n il numero dei posti di lavoro). Se necessario, ai due estremi della Centrale verrà installato un mezzo multiplo di tavola.

La prova di abbonato avverrà per assaggio con tono in cuffia.

7) Multiplo di giunzione: per ogni tavola 40 giunzioni con l'interurbano, servizio a doppio senso, jack con lampada di chiamata e lampada d'occupato. Tali linee saranno ridotte a 20 per le tavole destinate a Trieste, Venezia, Bologna.

Per ogni tavola 20 giunzioni con centrali automatiche con jack, lampada di chiamata e lampada di occupato.

20 con centrali a BL (10 per le centrali Bo 1851Ts)

8) Allo scopo di permettere un raggruppamento delle tavole diverso da quello di massima preventivato, il multiplo sarà fornito con gli elementi di cavo formati ma non saldati.

9) La FATME fornirà anche i permutatori completi nonché il cavo per l'installazione. Saranno fornite anche due macchine di chiamata per ciascun impianto, ma non la stazione d'energia.

*Tele. Roma**(4)*CENTRALE PER GENOVA

La centrale dovrà essere costituita da 10 posti di lavoro a tavoli abbinati sistema manuale a BC - 24 Volt per complessive 1400 linee d'abbonato.

Ciascun posto di lavoro sarà equipaggiato con:

- 140 jack d'abbonato con lampada di chiamata
- 40 jack per linee di giunzione verso centrale a BC con lampade di chiamata ~~di occupato~~ multiplati sugli altri posti di lavoro.
- 20 jack per linee di giunzione verso la centrale automatica con lampade di chiamata e di occupato multiplati sugli altri posti di lavoro.
- 17 coppie di cordoni.
- 3 microtelefoni a pettorale con cuffia per operatrice

Ogni posto di lavoro avrà in più una chiave per la separazione dei cordoni ~~e~~ ^{una chiave} per la richiamata.

Ogni tavolo sarà inoltre equipaggiato con 1400 jack per il multiplo delle linee d'abbonato, senza lampadine di occupato (segnale acustico sulla boccia).

Le coppie di cordoni avranno una sola chiave a due posizioni, una stabile per l'inclusione ed una instabile per la chiamata.

Le coppie di cordoni avranno doppia segnalazione di fine.

Il cablaggio per il multiplo sarà fornito a parte pronto per essere saldato.

La centrale sarà equipaggiata di macchina segnali a 24 Volt per chiamata e tono occupato.

*1 generatore per posto di lavoro
per corrente chiamata -*

1850

*Long**Roma 21/11/44*

CONFIDENTIALSUBJECT: Civil Telecommunications RequirementsMAIN H.Q. A.A.I.TEL. FILPOT 355Director, Comm Sub-Commission
HQ Allied Commission
-----X/21/2620 NOV 44

Reference your 4/23/-/CS of 11 NOV 44.

The arrangements made for provision are not exactly as indicated in para 3 (d) of your draft letter.

Major Tucker is calling at your office and will explain the arrangements which it was agreed should be made as the result of a meeting between Lt. Col. Scudder, representatives of supply branch AFHQ and himself.

*Wm. C. Schaefer*WCB:IEBrigadier,
C.S.O. L. OF C., ITALY

Director	
De Director	
Chief of Comms	<i>[Signature]</i>
Chief Postal	
H.Q. Cons. O.	
Asst. Ch. of Postal	
Consulship	
Chief Clerk	

CHOS	169849
FILE	
CS/4/23	

Date 22/11/44

CONFIDENTIAL

Communications S/c

SUBJECT:- SWITCHBOARD REQUIREMENTS NORTH OF THE LEGHORN -
FLORENCE - ANCONA LINE.

413.4/3

FROM:- CSO L OF C SOUTH ITALY.
TO :- CSO, AFHQ.

1. AS AGREED VERBALLY WITH LT COLONEL BECK,
THERE HAS BEEN PREPARED THE ATTACHED SPECIFICATION TO
COVER THE MANUFACTURE OF 8, 6, AND 4 POSITION L.D.
SWITCHBOARDS OF CIVIL TYPE AND WHICH ARE PLANNED FOR
INSTALLATION TRIESTE, MILAN, TURIN, AND LEGHORN.

20 NOVEMBER 1944.
FJDT/ECV.

Blackwell Col
BRIGADIER,
CSO L OF C ITALY.

COPY TO:- CSO, L OF C ITALY (REF X/21/30/1 OF 17 NOV. 44).
DIRECTOR, COMMUNICATIONS SUB-COMMISSION, ALLIED
COMMISSION.

Director	
D. Director	
Chief, Telecom	
Chief, Postal	
H. Q. Coms. O.	
Asst. Chief Postal	
Censorship	
Chief Clerk	

CROSS REFS.	
FILE	By fwd.
cs/4/23	

Date 22 NOV 1944

RECEIVED
22 NOV 1944
A. C.

Int Planning
John

CONFIDENTIAL

CSO L OF C SOUTH ITALY.

SPECIFICATION FOR CIVIL TYPE LONG DISTANCE SWITCHBOARDS
TO BE MADE BY F.A.T.M.E. FOR MILITARY PURPOSES.

1. GENERAL. BOARDS OF 4, 6 AND 8 POSITIONS ARE INVOLVED; THE FOLLOWING PARAGRAPHS APPLY TO ALL SIZES OF BOARD, INDIVIDUAL INDICATIONS OF CAPACITY PER BOARD BEING GIVEN WHERE NECESSARY.

2. APPARATUS INVOLVED. A COMPLETE SWITCHBOARD TO COMPRISE:- SWITCH SECTIONS, RINGING GENERATORS, MULTIPLE JACKS AND LAMPS, MULTIPLE CABLING, TRUNK TERMINATING EQUIPMENT, DISTRIBUTION FRAME AND CABLE FOR INTERCONNECTING SWITCHBOARD, TRUNK TERMINATIONS AND DISTRIBUTION FRAME.

3. POWER SUPPLY. THE EQUIPMENT TO BE DESIGNED TO OPERATE FROM A BATTERY OF 24 VOLTS. THE D.C. POWER SUPPLY IS NOT A PART OF THE EQUIPMENT TO BE PROVIDED UNDER THIS SPECIFICATION.

4. RINGING SUPPLY. FOR EACH SWITCHBOARD THERE ARE TO BE PROVIDED TWO RINGING GENERATORS OF THE ERCOLE MARELLI CR 20 TYPE ONE OF WHICH WILL NORMALLY CARRY THE LOAD THE OTHER ACTING AS A STANDBY. A CHANGE-OVER SWITCH TO BE PROVIDED FOR TRANSFERRING THE LOAD. FOR USE BETWEEN THE CHANGE-OVER SWITCH AND THE TRUNK TERMINATIONS ETC, THERE IS TO BE PROVIDED A SINGLE TRANSFORMER OF THE 30/12 TYPE.

5. KEYSHELF. THE KEYSHELF FOR EACH POSITION TO BE EQUIPPED WITH 10 CORD CIRCUITS WHICH, AS THE TRANSMISSION BRIDGES ARE TO BE INCLUDED IN THE TRUNK TERMINATIONS ARE TO BE OF 'DRY' TYPE. A PAIR OF KEYS TO BE PROVIDED IN EACH CORD THESE BEING CONNECTED IN SUCH A MANNER AS TO GIVE RINGING FACILITIES ON EACH CORD TOGETHER WITH 'SPEAK' AND 'MONITOR' FACILITIES. GENERALLY, THE CORD CIRCUITS AND ASSOCIATED POSITION CIRCUIT TO BE IN ACCORDANCE WITH APPROVED ISSUES OF F.A.T.M.E. DRAWINGS S1925, S1926, 200% EXCESS OPERATORS HEAD AND BREAST SETS TO BE PROVIDED. FATME STANDARD TRUNK POSITION KEYSHELF TO BE PROVIDED WITHOUT CALCULAGRAPH.

6. FACE EQUIPMENT. GENERAL. ONE MULTIPLE APPEARANCE IS REQUIRED ON EACH TWO POSITIONS. ONE CABLE TURNING SECTION TO BE PROVIDED CAPABLE OF BEING FITTED AT EITHER END. ALL TRUNK LINES TO BE COMPLETELY MULTIPLIED AND TO BE PROVIDED WITH LAMP CALLING AND VISUAL BUSY SIGNALS. POSITION LAMPS TO BE PROVIDED. CALL OPALS TO BE WHITE AND BUSY OPALS GREEN. THE TRUNK CIRCUITS SHALL BE IN ACCORDANCE WITH APPROVED ISSUES OF FATME DRAWINGS LISTED BELOW:-

LOCAL BATTERY LINE. S.1484.
COMMON BATTERY LINE. S.1492.
JUNCTION LINE. S.1927.
B/W DIAL LINE. S.4120.

ICATIONS OF CAPACITY FOR

2. APPARATUS INVOLVED. A COMPLETE SWITCHBOARD TO COMPRISE:- SWITCH SECTIONS, RINGING GENERATORS, MULTIPLE JACKS AND LAMPS, MULTIPLE CABLING, TRUNK TERMINATING EQUIPMENT, DISTRIBUTION FRAME AND CABLE FOR INTERCONNECTING SWITCHBOARD, TRUNK TERMINATIONS AND DISTRIBUTION FRAME.

3. POWER SUPPLY. THE EQUIPMENT TO BE DESIGNED TO OPERATE FROM A BATTERY OF 24 VOLTS. THE D.C. POWER SUPPLY IS NOT A PART OF THE EQUIPMENT TO BE PROVIDED UNDER THIS SPECIFICATION.

4. RINGING SUPPLY. FOR EACH SWITCHBOARD THERE ARE TO BE PROVIDED TWO RINGING GENERATORS OF THE ERCOLE MARELLI OR 20 TYPE ONE OF WHICH WILL NORMALLY CARRY THE LOAD THE OTHER ACTING AS A STANDBY. A CHANGE-OVER SWITCH TO BE PROVIDED FOR TRANSFERRING THE LOAD. FOR USE BETWEEN THE CHANGEOVER SWITCH AND THE TRUNK TERMINATIONS ETC. THERE IS TO BE PROVIDED A SINGLE TRANSFORMER OF THE 30/12 TYPE.

5. KEYSHELF. THE KEYSHELF FOR EACH POSITION TO BE EQUIPPED WITH TO CORD CIRCUITS WHICH, AS THE TRANSMISSION BRIDGES ARE TO BE INCLUDED IN THE TRUNK TERMINATIONS ARE TO BE OF 'DRY' TYPE. A PAIR OF KEYS TO BE PROVIDED IN EACH CORD THESE BEING CONNECTED IN SUCH A MANNER AS TO GIVE RINGING FACILITIES ON EACH CORD TOGETHER WITH 'SPEAK' AND 'MONITOR' FACILITIES. GENERALLY, THE CORD CIRCUITS ASSOCIATED POSITION CIRCUIT TO BE IN ACCORDANCE WITH APPROVED ISSUES OF F.A.T.M.E. DRAWINGS S1925, S1926, 200% EXCESS OPERATORS HEAD AND BREAST SETS TO BE PROVIDED. FATME STANDARD TRUNK POSITION KEYSHELF TO BE PROVIDED WITHOUT CALCULAGRAPH.

6. FACE EQUIPMENT. GENERAL. ONE MULTIPLE APPEARANCE IS REQUIRED ON EACH TWO POSITIONS. ONE CABLE TURNING SECTION TO BE PROVIDED CAPABLE OF BEING FITTED AT EITHER END. ALL TRUNK LINES TO BE COMPLETELY MULTIPLIED AND TO BE PROVIDED WITH LAMP CALLING AND VISUAL BUSY SIGNALS. POSITION LAMPS TO BE PROVIDED. CALL OPALS TO BE WHITE AND BUSY OPALS GREEN. THE TRUNK CIRCUITS SHALL BE IN ACCORDANCE WITH APPROVED ISSUES OF FATME DRAWINGS LISTED BELOW:-

LOCAL BATTERY LINE.
COMMON BATTERY LINE.
JUNCTION LINE.
B/W DIAL LINE.

7. FACE EQUIPMENT. CABLING. EACH COMPLETE SWITCHBOARD TO BE PROVIDED WITH THE MULTIPLE COMPLETELY WIRED, EACH SET OF JACK AND LAMP STRIPS BEING PACKED SEPARATELY. FOR ASSOCIATION WITH EACH JACK AND LAMP STRIP MULTIPLE UNIT THERE IS TO BE PROVIDED 50 FT. OF CABLE SWITCHBOARD CABLE ONE END OF WHICH IS TO BE FORMED OUT THE CABLE READY FOR CONNECTION TO THE JACK OR LAMP STRIP NEAREST THE APPROPRIATE TURNING SECTION; THIS CABLE TO BE USED TO MAKE THE APPROPRIATE CONNECTION TO THE TRUNK TERMINATION RACKS OR DISTRIBUTION FRAME.

8. DISTRIBUTION FRAME. THE DISTRIBUTION FRAME TO BE OF M.D.F. TYPE EVEN THOUGH IN CERTAIN CASES IT WILL BE USED ONLY AS AN I.D.F. THE FRAME NOT TO EXCEED 8'6" IN HEIGHT. ON THE LINE SIDE THERE ARE TO BE PROVIDED COMBINED PROTECTOR, HEAT COIL AND FUSE UNITS IN THE FOLLOWING QUANTITY:-

SIZE OF BOARD (POSITIONS)	NUMBER OF LINE TERMINATIONS
8	340
6	260
4	200

THE NUMBER OF EXCHANGE TERMINATIONS PROVIDED ARE TO BE PROPORTIONAL TO THE ABOVE. AN ADEQUATE NUMBER OF RINGS ARE TO BE PROVIDED. NO JUMPER WIRE IS REQUIRED.

9. TRUNK TERMINATION RACK. THE RACK TO BE NOT MORE THAN 3'6" IN HEIGHT.

10. LINE FACILITIES. THE NUMBER OF LINE FACILITIES OF EACH TYPE WHICH ARE TO BE PROVIDED IS AS INDICATED BELOW:-

SIZE OF BOARD (POSITIONS)	C.B. LINES	L.B. LINES	JUNCTION LINES	DIAL LINES
8	20 (40)	100	100	60
6	16 (20)	80	80	40
4	12 (20)	60	60	20 (40)

WHERE FIGURES ARE SHOWN IN BRACKETS IT IS REQUIRED THAT SPACE BE LEFT ON BOTH THE BOARD AND THE TRUNK TERMINATION RACK FOR THIS NUMBER OF EQUIPMENTS BUT THAT THE NUMBER OF FACILITIES ACTUALLY PROVIDED ARE TO BE THAT OF THE PRECEDING FIGURE EXTERNAL TO THE BRACKETS.

FOR MILITARY PURPOSES THE UTILISATION OF THE LINE FACILITIES WILL BE ON THE FOLLOWING BASIS:-

L.B. LINES. TRUNK CIRCUITS TO DISTANT CENTRALS THE TRUNKS BEING OPERATED GENERALLY ON A 500/20 OR 1000/20 BASIS.

JUNCTION LINES. JUNCTIONS TO MORE OR LESS LOCAL MILITARY SWITCHBOARDS. C.B. LINES. LINES TO SPECIAL SUBSCRIBERS HAVING C.B. FACILITIES, RECORD CLERK, ETC.

DIAL LINES. LINES TO LOCAL AUTOMATIC EXCHANGES OR, EXCEPTIONALLY, TO DISTANT AUTO EXCHANGES SIGNALLED ON A SPECIAL BASIS.

11. MECHANICAL AND ELECTRICAL CHARACTERISTICS. ALL MECHANICAL AND ELECTRICAL DETAILS TO BE SUBJECT TO APPROVAL BY THE MILITARY AUTHORITIES; IF THE MANUFACTURER DESIRES TO FACILITATE MANUFACTURE BY DEPARTMENT OF DEFENSE.

BE PROVIDED COMBINED PROTECTOR, HEAT COIL AND FUSE UNITS IN THE FOLLOWING QUANTITY:-

SIZE OF BOARD (POSITIONS)	NUMBER OF LINE TERMINATIONS
8	340
6	260
4	200

THE NUMBER OF EXCHANGE TERMINATIONS PROVIDED ARE TO BE PROPORTIONAL TO THE ABOVE. AN ADEQUATE NUMBER OF RINGS ARE TO BE PROVIDED. NO JUMPER WIRE IS REQUIRED.

9. TRUNK TERMINATION RACK. THE RACK TO BE NOT MORE THAN 3'6" IN HEIGHT.

10. LINE FACILITIES. THE NUMBER OF LINE FACILITIES OF EACH TYPE WHICH ARE TO BE PROVIDED IS AS INDICATED BELOW:-

SIZE OF BOARD (POSITIONS)	C.B. LINES	L.B. LINES	JUNCTION LINES	DIAL LINES
8	20 (40)	100	100	60
6	16 (20)	80	80	40
4	12 (20)	60	60	20 (40)

WHERE FIGURES ARE SHOWN IN BRACKETS IT IS REQUIRED THAT SPACE BE LEFT ON BOTH THE BOARD AND THE TRUNK TERMINATION RACK FOR THIS NUMBER OF EQUIPMENTS BUT THAT THE NUMBER OF FACILITIES ACTUALLY PROVIDED ARE TO BE THAT OF THE PRECEDING FIGURE EXTERNAL TO THE BRACKETS.

FOR MILITARY PURPOSES THE UTILISATION OF THE LINE FACILITIES WILL BE ON THE FOLLOWING BASIS:-

L.B. LINES. TRUNK CIRCUITS TO DISTANT CENTRALS THE TRUNKS BEING OPERATED GENERALLY ON A 500/20 OR 1000/20 BASIS.

JUNCTION LINES. JUNCTIONS TO MORE OR LESS LOCAL MILITARY SWITCHBOARDS. C.B. LINES. LINES TO SPECIAL SUBSCRIBERS HAVING C.B. FACILITIES, RECORD CLERK, ETC. DIAL LINES. LINES TO LOCAL AUTOMATIC EXCHANGES OR, EXCEPTIONALLY, TO DISTANT AUTO EXCHANGES SIGNALLED ON A SPECIAL BASIS.

11. MECHANICAL AND ELECTRICAL CHARACTERISTICS. ALL MECHANICAL AND ELECTRICAL DETAILS TO BE SUBJECT TO APPROVAL BY THE MILITARY AUTHORITIES; IF THE MANUFACTURER DESIRES TO FACILITATE MANUFACTURE BY DEPARTMENT OF DEFENSE DETAIL FROM THIS SPECIFICATION PRIOR APPROVAL MUST BE OBTAINED FROM THE COMPETENT MILITARY AUTHORITY.

20 NOVEMBER 1944.
FJDT/ECV.

CONFIDENTIAL

2-4

CSO L OF C SOUTH ITALY.

SPECIFICATION FOR CIVIL TYPE LONG DISTANCE SWITCHBOARDS
TO BE MADE BY F.A.T.M.E. FOR MILITARY PURPOSES.

1. GENERAL. BOARDS OF 4, 6 AND 8 POSITIONS ARE INVOLVED; THE FOLLOWING PARAGRAPHS APPLY TO ALL SIZES OF BOARD, INDIVIDUAL INDICATIONS OF CAPACITY PER BOARD BEING GIVEN WHERE NECESSARY.
2. APPARATUS INVOLVED. A COMPLETE SWITCHBOARD TO COMPRISE:- SWITCH SECTIONS, RINGING GENERATORS, MULTIPLE JACKS AND LAMPS, MULTIPLE CABLING, TRUNK TERMINATING EQUIPMENT, DISTRIBUTION FRAME AND CABLE FOR INTERCONNECTING SWITCHBOARD, TRUNK TERMINATIONS AND DISTRIBUTION FRAME.
3. POWER SUPPLY. THE EQUIPMENT TO BE DESIGNED TO OPERATE FROM A BATTERY OF 24 VOLTS. THE D.C. POWER SUPPLY IS NOT A PART OF THE EQUIPMENT TO BE PROVIDED UNDER THIS SPECIFICATION.
4. RINGING SUPPLY. FOR EACH SWITCHBOARD THERE ARE TO BE PROVIDED TWO RINGING GENERATORS OF THE ERCOLE MARELLI CR 20 TYPE ONE OF WHICH WILL NORMALLY CARRY THE LOAD THE OTHER ACTING AS A STANDBY. A CHANGEOVER SWITCH TO BE PROVIDED FOR TRANSFERRING THE LOAD. FOR USE BETWEEN THE CHANGEOVER SWITCH AND THE TRUNK TERMINATIONS ETC, THERE IS TO BE PROVIDED A SINGLE TRANSFORMER OF THE 30/12 TYPE.
5. KEYSHELF. THE KEYSHELF FOR EACH POSITION TO BE EQUIPPED WITH 10 CORD CIRCUITS WHICH, AS THE TRANSMISSION BRIDGES ARE TO BE INCLUDED IN THE TRUNK TERMINATIONS ARE TO BE OF 'DRY' TYPE. A PAIR OF KEYS TO BE PROVIDED IN EACH CORD THESE BEING CONNECTED IN SUCH A MANNER AS TO GIVE RINGING FACILITIES ON EACH CORD TOGETHER WITH 'SPEAK' AND 'MONITOR' FACILITIES. GENERALLY, THE CORD CIRCUITS AND ASSOCIATED POSITION CIRCUIT TO BE IN ACCORDANCE WITH APPROVED ISSUES OF F.A.T.M.E. DRAWINGS S1925, S1926, 200% EXCESS OPERATORS HEAD AND BREAST SETS TO BE PROVIDED. FATME STANDARD TRUNK POSITION KEYSHELF TO BE PROVIDED WITHOUT CALCULAGRAPH.
6. FACE EQUIPMENT. GENERAL. ONE MULTIPLE APPEARANCE IS REQUIRED ON EACH TWO POSITIONS. ONE CABLE TURNING SECTION TO BE PROVIDED CAPABLE OF BEING FITTED AT EITHER END. ALL TRUNK LINES TO BE COMPLETELY MULTIPLIED AND TO BE PROVIDED WITH LAMP CALLING AND VISUAL BUSY SIGNALS. POSITION LAMPS TO BE PROVIDED. CALL OPALS TO BE WHITE AND BUSY OPALS GREEN. THE TRUNK CIRCUITS SHALL BE IN ACCORDANCE WITH APPROVED ISSUES OF FATME DRAWINGS LISTED BELOW:-

LOCAL BATTERY LINE.
COMMON BATTERY LINE.
JUNCTION LINE.
B/W DIAL LINE.

S.1484.
S.1492.
S.1927.
S.4120.

1845

7. FACE EQUIPMENT. CABLING. EACH COMPLETE SWITCHBOARD TO BE

1. GENERAL. BOARDS OF 4, 6 AND 8 POSITIONS ARE INVOLVED; THE FOLLOWING PARAGRAPHS APPLY TO ALL SIZES OF BOARD, INDIVIDUAL INDICATIONS OF CAPACITY PER BOARD BEING GIVEN WHERE NECESSARY.

2. APPARATUS INVOLVED. A COMPLETE SWITCHBOARD TO COMPRISE: SWITCH SECTIONS, RINGING GENERATORS, MULTIPLE JACKS AND LAMPS, MULTIPLE CABLING, TRUNK TERMINATING EQUIPMENT, DISTRIBUTION FRAME AND CABLE FOR INTERCONNECTING SWITCHBOARD, TRUNK TERMINATIONS AND DISTRIBUTION FRAME.

3. POWER SUPPLY. THE EQUIPMENT TO BE DESIGNED TO OPERATE FROM A BATTERY OF 24 VOLTS. THE D.C. POWER SUPPLY IS NOT A PART OF THE EQUIPMENT TO BE PROVIDED UNDER THIS SPECIFICATION.

4. RINGING SUPPLY. FOR EACH SWITCHBOARD THERE ARE TO BE PROVIDED TWO RINGING GENERATORS OF THE ERCOLE MARELLI OR 20 TYPE ONE OF WHICH WILL NORMALLY CARRY THE LOAD THE OTHER ACTING AS A STANDBY. A CHANGEOVER SWITCH TO BE PROVIDED FOR TRANSFERRING THE LOAD. FOR USE BETWEEN THE CHANGEOVER SWITCH AND THE TRUNK TERMINATIONS ETC, THERE IS TO BE PROVIDED A SINGLE TRANSFORMER OF THE 30/12 TYPE.

5. KEYSHELF. THE KEYSHELF FOR EACH POSITION TO BE EQUIPPED WITH 10 CORD CIRCUITS WHICH, AS THE TRANSMISSION BRIDGES ARE TO BE INCLUDED IN THE TRUNK TERMINATIONS ARE TO BE OF 'DRY' TYPE. A PAIR OF KEYS TO BE PROVIDED IN EACH CORD THESE BEING CONNECTED IN SUCH A MANNER AS TO GIVE RINGING FACILITIES ON EACH CORD TOGETHER WITH 'SPEAK' AND 'MONITOR' FACILITIES. GENERALLY, THE CORD CIRCUITS AND ASSOCIATED POSITION CIRCUIT TO BE IN ACCORDANCE WITH APPROVED ISSUES OF F.A.T.M.E. DRAWINGS S1925, S1926. 200% EXCESS OPERATORS HEAD AND BREAST SETS TO BE PROVIDED. FATME STANDARD TRUNK POSITION KEYSHELF TO BE PROVIDED WITHOUT CALCULAGRAPH.

6. FACE EQUIPMENT. GENERAL. ONE MULTIPLE APPEARANCE IS REQUIRED ON EACH TWO POSITIONS. ONE CABLE TURNING SECTION TO BE PROVIDED CAPABLE OF BEING FITTED AT EITHER END. ALL TRUNK LINES TO BE COMPLETELY MULTIPLED AND TO BE PROVIDED WITH LAMP CALLING AND VISUAL BUSY SIGNALS. POSITION LAMPS TO BE PROVIDED. CALL OPALS TO BE WHITE AND BUSY OPALS GREEN. THE TRUNK CIRCUITS SHALL BE IN ACCORDANCE WITH APPROVED ISSUES OF FATME DRAWINGS LISTED BELOW:-

LOCAL BATTERY LINE.
COMMON BATTERY LINE.
JUNCTION LINE.
B/W DIAL LINE.

1845

7. FACE EQUIPMENT. CABLING. EACH COMPLETE SWITCHBOARD TO BE PROVIDED WITH THE MULTIPLE COMPLETELY WIRED, EACH SET OF JACK AND LAMP STRIPS BEING PACKED SEPARATELY. FOR ASSOCIATION WITH EACH JACK AND LAMP STRIP MULTIPLE UNIT THERE IS TO BE PROVIDED 50 FEET OF SWITCHBOARD CABLE ONE END OF WHICH IS TO BE FORMED OUT AND TAGGED READY FOR CONNECTION TO THE JACK OR LAMP STRIP NEAREST THE CABLE TURNING SECTION; THIS CABLE TO BE USED TO MAKE THE APPROPRIATE CONNECTION TO THE TRUNK TERMINATION RACKS OR DISTRIBUTION FRAME.

2-5
B. DISTRIBUTION FRAME. THE DISTRIBUTION FRAME TO BE OF M.D.F. TYPE EVEN THOUGH IN CERTAIN CASES IT WILL BE USED ONLY AS AN I.D.F. THE FRAME NOT TO EXCEED 8'6" IN HEIGHT. ON THE LINE SIDE THERE ARE TO BE PROVIDED COMBINED PROTECTOR, HEAT COIL AND FUSE UNITS IN THE FOLLOWING QUANTITY:-

SIZE OF BOARD (POSITIONS)	NUMBER OF LINE TERMINATIONS
8	340
6	260
4	200

THE NUMBER OF EXCHANGE TERMINATIONS PROVIDED ARE TO BE PROPORTIONAL TO THE ABOVE. AN ADEQUATE NUMBER OF RINGS ARE TO BE PROVIDED. NO JUMPER WIRE IS REQUIRED.

9. TRUNK TERMINATION RACK. THE RACK TO BE NOT MORE THAN 3'6" IN HEIGHT.

10. LINE FACILITIES. THE NUMBER OF LINE FACILITIES OF EACH TYPE WHICH ARE TO BE PROVIDED IS AS INDICATED BELOW:-

SIZE OF BOARD (POSITIONS)	C.B. LINES	L.B. LINES	JUNCTION LINES	DIAL LINES
8	20 (40)	100	100	60
6	16 (20)	80	80	40
4	12 (20)	60	60	20 (40)

WHERE FIGURES ARE SHOWN IN BRACKETS IT IS REQUIRED THAT SPACE BE LEFT ON BOTH THE BOARD AND THE TRUNK TERMINATION RACK FOR THIS NUMBER OF EQUIPMENTS BUT THAT THE NUMBER OF FACILITIES ACTUALLY PROVIDED ARE TO BE THAT OF THE PRECEDING FIGURE EXTERNAL TO THE BRACKETS.

FOR MILITARY PURPOSES THE UTILISATION OF THE LINE FACILITIES WILL BE ON THE FOLLOWING BASIS:-

L.B. LINES. TRUNK CIRCUITS TO DISTANT CENTRALS THE TRUNKS BEING OPERATED GENERALLY ON A 500/20 OR 1000/20 BASIS.

JUNCTION LINES. JUNCTIONS TO MORE OR LESS LOCAL MILITARY SWITCHBOARDS. C.B. LINES. LINES TO SPECIAL SUBSCRIBERS HAVING C.B. FACILITIES, RECORD CLERK, ETC. DIAL LINES. LINES TO LOCAL AUTOMATIC EXCHANGES OR, EXCEPTIONALLY, TO DISTANT AUTO EXCHANGES SIGNALLED ON A SPECIAL BASIS.

11. MECHANICAL AND ELECTRICAL CHARACTERISTICS. ALL MECHANICAL AND ELECTRICAL DETAILS TO BE SUBJECT TO APPROVAL BY THE MILITARY AUTHORITIES; IF THE MANUFACTURER DESIRES TO FACILITATE MANUFACTURE BY DEPARTING IN DETAIL FROM THIS SPECIFICATION PRIOR APPROVAL MUST BE OBTAINED FROM THE

340

8

260

6

200

4

THE NUMBER OF EXCHANGE TERMINATIONS PROVIDED ARE TO BE PROPORTIONAL TO THE ABOVE. AN ADEQUATE NUMBER OF RINGS ARE TO BE PROVIDED. NO JUMPER WIRE IS REQUIRED.

9. TRUNK TERMINATION RACK. THE RACK TO BE NOT MORE THAN 3'6" IN HEIGHT.

10. LINE FACILITIES. THE NUMBER OF LINE FACILITIES OF EACH TYPE WHICH ARE TO BE PROVIDED IS AS INDICATED BELOW:-

SIZE OF BOARD (POSITIONS)	C.B. LINES	L.B. LINES	JUNCTION LINES	DIAL LINES
8	20 (40)	100	100	60
6	16 (20)	80	30	40
4	12 (20)	60	60	20 (40)

WHERE FIGURES ARE SHOWN IN BRACKETS IT IS REQUIRED THAT SPACE BE LEFT ON BOTH THE BOARD AND THE TRUNK TERMINATION RACK FOR THIS NUMBER OF EQUIPMENTS BUT THAT THE NUMBER OF FACILITIES ACTUALLY PROVIDED ARE TO BE THAT OF THE PRECEDING FIGURE EXTERNAL TO THE BRACKETS.

FOR MILITARY PURPOSES THE UTILISATION OF THE LINE FACILITIES WILL BE ON THE FOLLOWING BASIS:-

L.B. LINES. TRUNK CIRCUITS TO DISTANT CENTRALS THE TRUNKS BEING OPERATED GENERALLY ON A 500/20 OR 1000/20 BASIS.

JUNCTION LINES. JUNCTIONS TO MORE OR LESS LOCAL MILITARY SWITCHBOARDS. C.B. LINES. LINES TO SPECIAL SUBSCRIBERS HAVING C.B. FACILITIES, RECORD CLERK, ETC. DIAL LINES. LINES TO LOCAL AUTOMATIC EXCHANGES OR, EXCEPTIONALLY, TO DISTANT AUTO EXCHANGES SIGNALLED ON A SPECIAL BASIS.

11. MECHANICAL AND ELECTRICAL CHARACTERISTICS. ALL MECHANICAL AND ELECTRICAL DETAILS TO BE SUBJECT TO APPROVAL BY THE MILITARY AUTHORITIES; IF THE MANUFACTURER DESIRES TO FACILITATE MANUFACTURE BY DEPARTING IN DETAIL FROM THIS SPECIFICATION PRIOR APPROVAL MUST BE OBTAINED FROM THE COMPETENT MILITARY AUTHORITY.

20 NOVEMBER 1944.
FJDT/ECV.

CONFIDENTIAL

CSO L OF C SOUTH ITALY.

SPECIFICATION FOR CIVIL TYPE LONG DISTANCE SWITCHBOARDS
TO BE MADE BY F.A.T.M.E. FOR MILITARY PURPOSES.

1. GENERAL. BOARDS OF 4, 6 AND 8 POSITIONS ARE INVOLVED; THE FOLLOWING PARAGRAPHS APPLY TO ALL SIZES OF BOARD, INDIVIDUAL INDICATIONS OF CAPACITY PER BOARD BEING GIVEN WHERE NECESSARY.

2. APPARATUS INVOLVED. A COMPLETE SWITCHBOARD TO COMPRISE:- SWITCH SECTIONS, RINGING GENERATORS, MULTIPLE JACKS AND LAMPS, MULTIPLE CABLING, TRUNK TERMINATING EQUIPMENT, DISTRIBUTION FRAME AND CABLE FOR INTERCONNECTING SWITCHBOARD, TRUNK TERMINATIONS AND DISTRIBUTION FRAME.

3. POWER SUPPLY. THE EQUIPMENT TO BE DESIGNED TO OPERATE FROM A BATTERY OF 24 VOLTS. THE D.C. POWER SUPPLY IS NOT A PART OF THE EQUIPMENT TO BE PROVIDED UNDER THIS SPECIFICATION.

4. RINGING SUPPLY. FOR EACH SWITCHBOARD THERE ARE TO BE PROVIDED TWO RINGING GENERATORS OF THE ERCOLE MARELLI OR 20 TYPE ONE OF WHICH WILL NORMALLY CARRY THE LOAD THE OTHER ACTING AS A STANDBY. A CHANGEOVER SWITCH TO BE PROVIDED FOR TRANSFERRING THE LOAD. FOR USE BETWEEN THE CHANGEOVER SWITCH AND THE TRUNK TERMINATIONS ETC, THERE IS TO BE PROVIDED A SINGLE TRANSFORMER OF THE 30/12 TYPE.

5. KEYSHELF. THE KEYSHELF FOR EACH POSITION TO BE EQUIPPED WITH 10 CORD CIRCUITS WHICH, AS THE TRANSMISSION BRIDGES ARE TO BE INCLUDED IN THE TRUNK TERMINATIONS ARE TO BE OF 'DRY' TYPE. A PAIR OF KEYS TO BE PROVIDED IN EACH CORD THESE BEING CONNECTED IN SUCH A MANNER AS TO GIVE RINGING FACILITIES ON EACH CORD TOGETHER WITH 'SPEAK' AND 'MONITOR' FACILITIES. GENERALLY, THE CORD CIRCUITS AND ASSOCIATED POSITION CIRCUIT TO BE IN ACCORDANCE WITH APPROVED ISSUES OF F.A.T.M.E. DRAWINGS S1925, S1926, 200% EXCESS OPERATORS HEAD AND BREAST SETS TO BE PROVIDED. FATME STANDARD TRUNK POSITION KEYSHELF TO BE PROVIDED WITHOUT CALCULAGRAPH.

6. FACE EQUIPMENT. GENERAL. ONE MULTIPLE APPEARANCE IS REQUIRED ON EACH TWO POSITIONS. ONE CABLE TURNING SECTION TO BE PROVIDED CAPABLE OF BEING FITTED AT EITHER END. ALL TRUNK LINES TO BE COMPLETELY MULTIPLIED AND TO BE PROVIDED WITH LAMP CALLING AND VISUAL SIGNALS. POSITION LAMPS TO BE PROVIDED. CALL OPALS TO BE WHITE AND BUSY OPALS GREEN. THE TRUNK CIRCUITS SHALL BE IN ACCORDANCE WITH APPROVED ISSUES OF FATME DRAWINGS LISTED BELOW:-

LOCAL BATTERY LINE.	S.1484.
COMMON BATTERY LINE.	S.1492.
JUNCTION LINE.	S.1927.
B/W DIAL LINE.	S.4120.

7. FACE EQUIPMENT. CABLING. EACH COMPLETE SWITCHBOARD TO BE PROVIDED WITH THE MULTIPLE COMPLETELY WIRED, EACH SET OF JACK AND

1. GENERAL. BOARDS OF 4, 6 AND 8 POSITIONS ARE INVOLVED; THE FOLLOWING PARAGRAPHS APPLY TO ALL SIZES OF BOARD, INDIVIDUAL INDICATIONS OF CAPACITY PER BOARD BEING GIVEN WHERE NECESSARY.
2. APPARATUS INVOLVED. A COMPLETE SWITCHBOARD TO COMPRISE: SWITCH SECTIONS, RINGING GENERATORS, MULTIPLE JACKS AND LAMPS, MULTIPLE CABLING, TRUNK TERMINATING EQUIPMENT, DISTRIBUTION FRAME AND CABLE FOR INTERCONNECTING SWITCHBOARD, TRUNK TERMINATIONS AND DISTRIBUTION FRAME.
3. POWER SUPPLY. THE EQUIPMENT TO BE DESIGNED TO OPERATE FROM A BATTERY OF 24 VOLTS. THE D.C. POWER SUPPLY IS NOT A PART OF THE EQUIPMENT TO BE PROVIDED UNDER THIS SPECIFICATION.
4. RINGING SUPPLY. FOR EACH SWITCHBOARD THERE ARE TO BE PROVIDED TWO RINGING GENERATORS OF THE ERCOLE MARELLI CR 20 TYPE ONE OF WHICH WILL NORMALLY CARRY THE LOAD THE OTHER ACTING AS A STANDBY. A CHANGEOVER SWITCH TO BE PROVIDED FOR TRANSFERRING THE LOAD. FOR USE BETWEEN THE CHANGEOVER SWITCH AND THE TRUNK TERMINATIONS ETC, THERE IS TO BE PROVIDED A SINGLE TRANSFORMER OF THE 30/12 TYPE.
5. KEYSHELF. THE KEYSHELF FOR EACH POSITION TO BE EQUIPPED WITH 10 CORD CIRCUITS WHICH, AS THE TRANSMISSION BRIDGES ARE TO BE INCLUDED IN THE TRUNK TERMINATIONS ARE TO BE OF 'DRY' TYPE. A PAIR OF KEYS TO BE PROVIDED IN EACH CORD THESE BEING CONNECTED IN SUCH A MANNER AS TO GIVE RINGING FACILITIES ON EACH CORD TOGETHER WITH 'SPEAK' AND 'MONITOR' FACILITIES. GENERALLY, THE CORD CIRCUITS AND ASSOCIATED POSITION CIRCUIT TO BE IN ACCORDANCE WITH APPROVED ISSUES OF F.A.T.M.E. DRAWINGS S1925, S1926. 200% EXCESS OPERATORS HEAD AND BREAST SETS TO BE PROVIDED. FATME STANDARD TRUNK POSITION KEYSHELF TO BE PROVIDED WITHOUT CALCULAGRAPH.
6. FACE EQUIPMENT. GENERAL. ONE MULTIPLE APPEARANCE IS REQUIRED ON EACH TWO POSITIONS. ONE CABLE TURNING SECTION TO BE PROVIDED CAPABLE OF BEING FITTED AT EITHER END. ALL TRUNK LINES TO BE COMPLETELY MULTIPLIED AND TO BE PROVIDED WITH LAMP CALLING AND VISUAL SIGNALS. POSITION LAMPS TO BE PROVIDED. CALL OPALS TO BE WHITE AND BUSY OPALS GREEN. THE TRUNK CIRCUITS SHALL BE IN ACCORDANCE WITH APPROVED ISSUES OF FATME DRAWINGS LISTED BELOW:--

LOCAL BATTERY LINE.	S.1484.
COMMON BATTERY LINE.	S.1492.
JUNCTION LINE.	S.1927.
B/W DIAL LINE.	S.4120.
7. FACE EQUIPMENT. CABLING. EACH COMPLETE SWITCHBOARD TO BE PROVIDED WITH THE MULTIPLE COMPLETELY WIRED, EACH SET OF JACK AND LAMP STRIPS BEING PACKED SEPARATELY. FOR ASSOCIATION WITH EACH JACK AND LAMP STRIP MULTIPLE UNIT THERE IS TO BE PROVIDED 50 FEET OF SWITCHBOARD CABLE ONE END OF WHICH IS TO BE FORMED OUT AND TAPPED READY FOR CONNECTION TO THE JACK OR LAMP STRIP NEAREST THE CABLE TURNING SECTION; THIS CABLE TO BE USED TO MAKE THE APPROPRIATE CONNECTION TO THE TRUNK TERMINATION RACKS OR DISTRIBUTION FRAME.

2-7
B. DISTRIBUTION FRAME. THE DISTRIBUTION FRAME TO BE OF M.D.F. TYPE EVEN THOUGH IN CERTAIN CASES IT WILL BE USED ONLY AS AN I.D.F. THE FRAME NOT TO EXCEED 8'6" IN HEIGHT. ON THE LINE SIDE THERE ARE TO BE PROVIDED COMBINED PROTECTOR, HEAT COIL AND FUSE UNITS IN THE FOLLOWING QUANTITY:-

SIZE OF BOARD (POSITIONS)	NUMBER OF LINE TERMINATIONS
8	340
6	260
4	200

THE NUMBER OF EXCHANGE TERMINATIONS PROVIDED ARE TO BE PROPORTIONAL TO THE ABOVE. AN ADEQUATE NUMBER OF RINGS ARE TO BE PROVIDED. NO JUMPER WIRE IS REQUIRED.

9. TRUNK TERMINATION RACK. THE RACK TO BE NOT MORE THAN 8'6" IN HEIGHT.

10. LINE FACILITIES. THE NUMBER OF LINE FACILITIES OF EACH TYPE WHICH ARE TO BE PROVIDED IS AS INDICATED BELOW:-

SIZE OF BOARD (POSITIONS)	C.B. LINES	L.B. LINES	JUNCTION LINES	DIAL LINES
8	20 (40)	100	100	60
6	16 (20)	80	80	40
4	12 (20)	60	60	20 (40)

WHERE FIGURES ARE SHOWN IN BRACKETS IT IS REQUIRED THAT SPACE BE LEFT ON BOTH THE BOARD AND THE TRUNK TERMINATION RACK FOR THIS NUMBER OF EQUIPMENTS BUT THAT THE NUMBER OF FACILITIES ACTUALLY PROVIDED ARE TO BE THAT OF THE PRECEDING FIGURE EXTERNAL TO THE BRACKETS.

FOR MILITARY PURPOSES THE UTILISATION OF THE LINE FACILITIES WILL BE ON THE FOLLOWING BASIS:-

L.B. LINES. TRUNK CIRCUITS TO DISTANT CENTRALS THE TRUNKS BEING OPERATED GENERALLY ON A 500/20 OR 1000/20 BASIS.

JUNCTION LINES. JUNCTIONS TO MORE OR LESS LOCAL MILITARY SWITCHBOARDS. C.B. LINES. LINES TO SPECIAL SUBSCRIBERS HAVING C.B. FACILITIES, RECORD CLERK, ETC. DIAL LINES. LINES TO LOCAL AUTOMATIC EXCHANGES OR, EXCEPTIONALLY, TO DISTANT AUTO EXCHANGES SIGNALLED ON A SPECIAL BASIS.

11. MECHANICAL AND ELECTRICAL CHARACTERISTICS. ALL MECHANICAL AND ELECTRICAL DETAILS TO BE SUBJECT TO APPROVAL BY THE MILITARY AUTHORITIES; IF THE MANUFACTURER DESIRES TO FACILITATE MANUFACTURE BY DEPARTING FROM THE DETAIL FROM THIS SPECIFICATION PRIOR APPROVAL MUST BE OBTAINED FROM THE

260

200

THE NUMBER OF EXCHANGE TERMINATIONS PROVIDED ARE TO BE PROPORTIONAL TO THE ABOVE. AN ADEQUATE NUMBER OF RINGS ARE TO BE PROVIDED. NO JUMPER WIRE IS REQUIRED.

9. TRUNK TERMINATION RACK. THE RACK TO BE NOT MORE THAN 3'6" IN HEIGHT.

10. LINE FACILITIES. THE NUMBER OF LINE FACILITIES OF EACH TYPE WHICH ARE TO BE PROVIDED IS AS INDICATED BELOW:-

SIZE OF BOARD (POSITIONS)	C.B. LINES	L.B. LINES	JUNCTION LINES	DIAL LINES
8	20 (40)	100	100	60
6	16 (20)	80	80	40
4	12 (20)	60	60	20 (40)

WHERE FIGURES ARE SHOWN IN BRACKETS IT IS REQUIRED THAT SPACE BE LEFT ON BOTH THE BOARD AND THE TRUNK TERMINATION RACK FOR THIS NUMBER OF EQUIPMENTS BUT THAT THE NUMBER OF FACILITIES ACTUALLY PROVIDED ARE TO BE THAT OF THE PRECEDING FIGURE EXTERNAL TO THE BRACKETS.

FOR MILITARY PURPOSES THE UTILISATION OF THE LINE FACILITIES WILL BE ON THE FOLLOWING BASIS:-

1842

L.B. LINES. TRUNK CIRCUITS TO DISTANT CENTRALS THE TRUNKS BEING OPERATED GENERALLY ON A 500/20 OR 1000/20 BASIS.

JUNCTION LINES. JUNCTIONS TO MORE OR LESS LOCAL MILITARY SWITCHBOARDS.

C.B. LINES. LINES TO SPECIAL SUBSCRIBERS HAVING C.B. FACILITIES, RECORD CLERK, ETC.

DIAL LINES. LINES TO LOCAL AUTOMATIC EXCHANGES OR, EXCEPTIONALLY, TO DISTANT AUTO EXCHANGES SIGNALLED ON A SPECIAL BASIS.

11. MECHANICAL AND ELECTRICAL CHARACTERISTICS. ALL MECHANICAL AND ELECTRICAL DETAILS TO BE SUBJECT TO APPROVAL BY THE MILITARY AUTHORITIES; IF THE MANUFACTURER DESIRES TO FACILITATE MANUFACTURE BY DEPARTING IN DETAIL FROM THIS SPECIFICATION PRIOR APPROVAL MUST BE OBTAINED FROM THE COMPETENT MILITARY AUTHORITY.

20 NOVEMBER 1944.
FJDT/ECV.

A. Requirements of A.C.1. Toll Positions

- a. 1-8 position. 30 ring down LD Tks. with relay sets. Mult. alternate positions. also 4 appearances - 20 jacks and lamps each without relays.
- b. 1-6 position. 20 ring down and 20 CB Trunks all equipped.
- c. 4-4 positions. 20 ring down and 10 CB Trunks all equipped.

2. C.B. Local Positions

- a. 1-16 position with 2000 mult.; with 20 mag. and 20 CB/auto relay sets, and all misc. circuits.
- b. 2-10 position with 1400 mult.; 20 mag. and 20 CB/auto relay sets. etc.
- c. 3-6 position with 800 mult.; 20 mag. and 20 CB/auto relay sets, etc.

B. Major Tucker's Scheme

- (1) 26 Toll positions being reconditioned (14 old and 12 new).
92 CB - Toll positions being manufactured to military Specn.
- (2) Military needs as follows:

Toll: 14 reconditioned boards as in (a)
22 to be manufactured - no specn. prepared as yet.

- (3) Civil needs as follows:

Toll: 12 reconditioned boards as in (a)
20 to be manufactured - no specn. prepared as yet.

Local: 54 position from 92 in (a).

- (4) Distribution of needs as in table below.

1841

Town	Long distance position		Local positions	
	Military	Civil	Military	Civil
Florence	-	Extension of 2	-	-
Bologna	-	4/20+10	-	6/800
Venice	6	4/20+10	-	6/800
Genoa	8	6/20+20	-	10/1400
Milan	8	8/30+20	-	16/2000
Trieste	8	2	-	6/800
Turin	6	6/20+20	-	10/1400

C. New Proposals.

- (1) New Fatme boards are sleeve control with consequent waste of relays on local equipment.

Proposal to redesign, reducing local multiple and equipment and make new specn. Also, Italians and A.C. will prepare new specn. for CB local boards.

Boards will be ordered and paid for by military, but State will agree to purchase later.

Int Planning file
HOM

0460