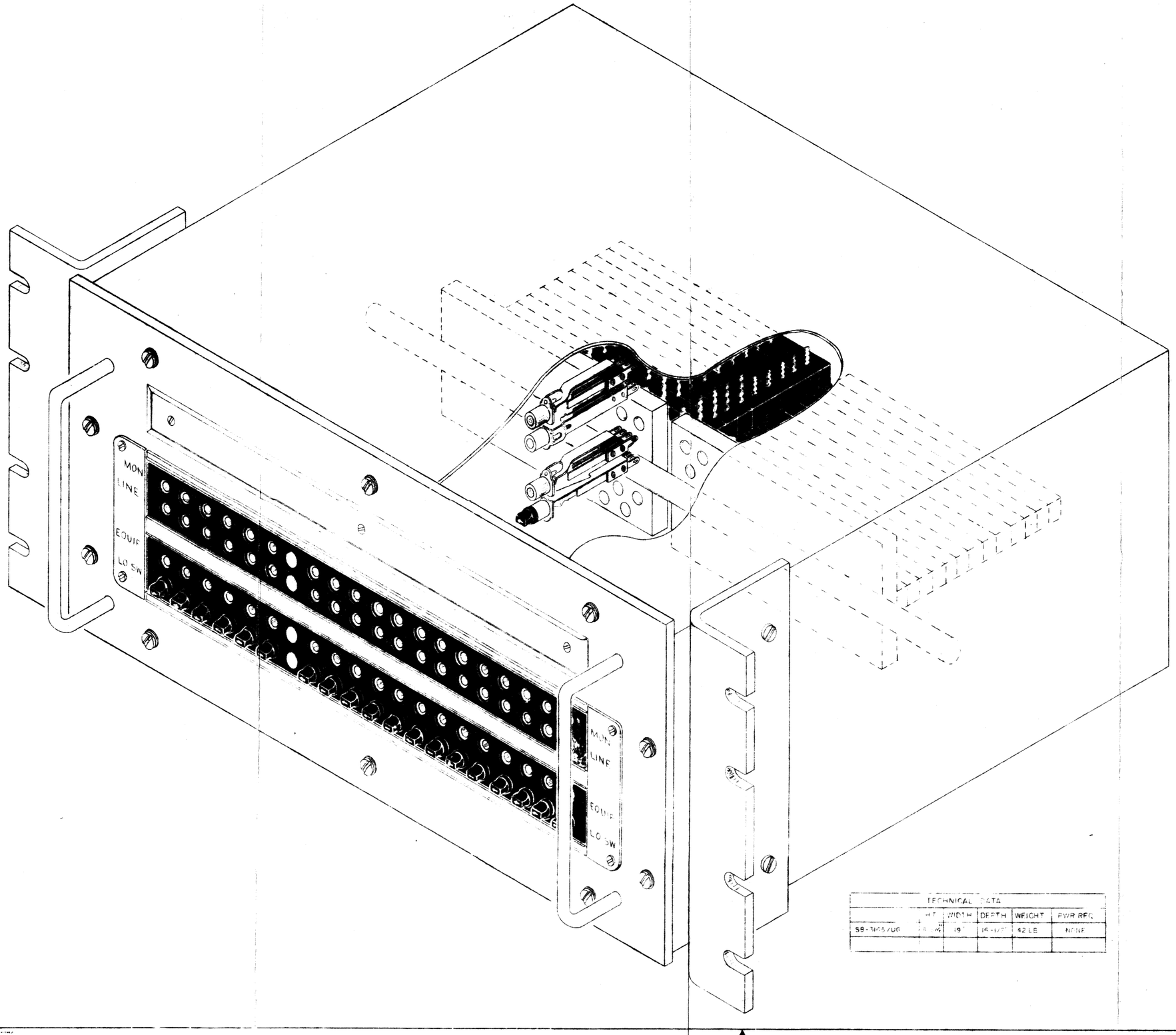
REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVED
	A	UPDATED INITIAL ISSUE	22670	
	B	ADDED NOTE 1 AND ADDED SHEETS 4 AND 5. CHANGES MADE IAW NSEF LTR SER 917-036 OF 18 AUG 1970	8-26-70	
	C	CHANGED DWG NO. WAS RW-10F-2196	3-10-71	
	D	REVISED TERMINALS ON TB-2, SHEET 5	6-6-72	



NOTES:

1. STRAPPING AND WIRING ON SHEETS 2 & 3 PERTAIN TO PRESENTLY INSTALLED MODULES. ANY FUTURE INSTALLATIONS ARE TO BE STRAPPED AND WIRED IAW SHEETS 4 & 5. THIS STRAPPING PERMITS PATCHING WHILE LOCKOUT SWITCH IS ENGAGED.

REFERENCED
NAVSHIPS [illegible]

[illegible] FOR [illegible] USE.
THIS DWG SUPERSEDES NAVELEX DWG [illegible]

TECHNICAL DATA					
	HT	WIDTH	DEPTH	WEIGHT	PWR REQ
SB-3145/UG	15 3/4"	19"	15-1/2"	42 LB	NONE

APPROVAL	
PROJECT ENG	
SECTION HEAD	
BRANCH HEAD	
DIVISION HEAD	
DRAFTING SECT	
DRAWN	TM
	DATE
SATISFACTORY TO	
	DATE

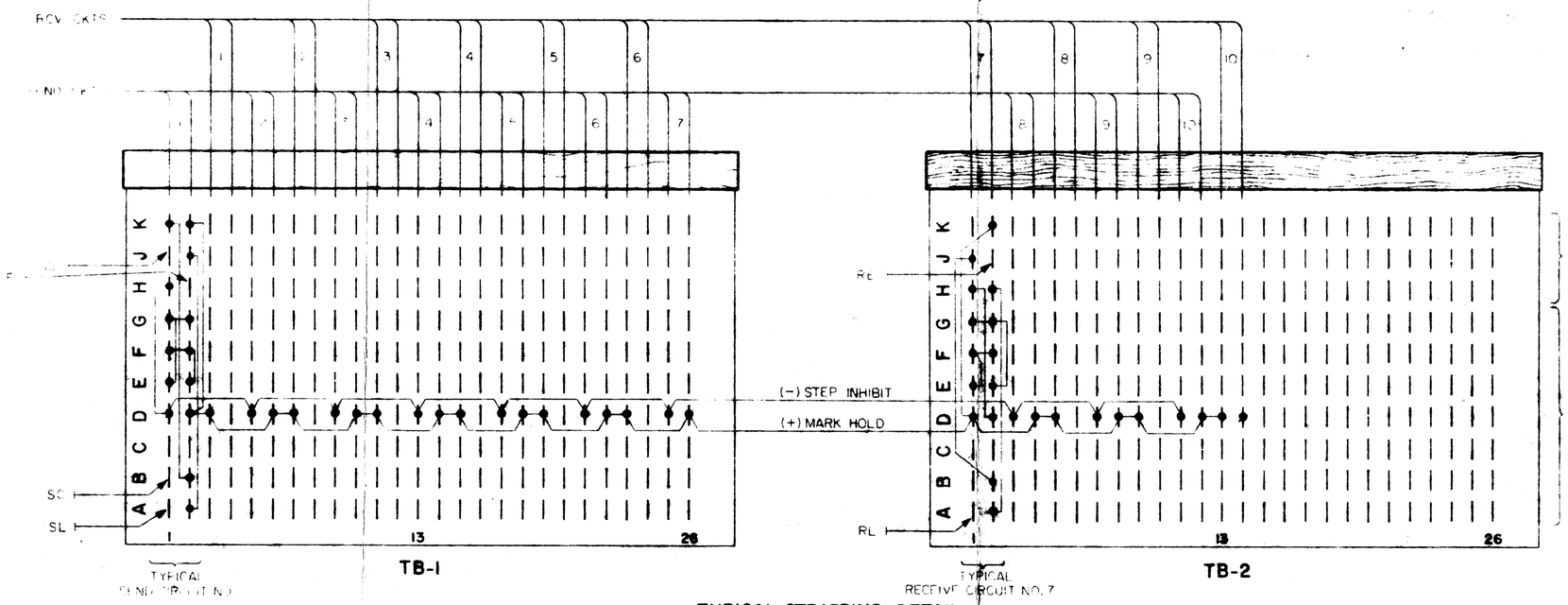
NAVAL ELECTRONIC SYSTEMS COMMAND
WASHINGTON, D.C. 20390
COMNAVSECGRU — FOR SHORE USE

STANDARD PLAN
SB-3145/UG

SIZE	CODE IDENT NO	NAVELECSYSCOM DRAWING NO	REV
F	29355	0103177	D

SCALE — SHEET 1 OF 5

ENCL ( ) TO NAVELECSYSCOMSEDIV LTR SER OF



ODD ROW	EVEN ROW		ODD ROW	EVEN ROW
		K		
	RE	J	SS	
		H		SE
		G		
		F		
		E		
(+) MH		D	(-) STEP INHIBIT	(+) MH
		C		
		B	SC	
RL		A	SL	

RCV CKTS & SEND CKTS
EXT LINE TERM

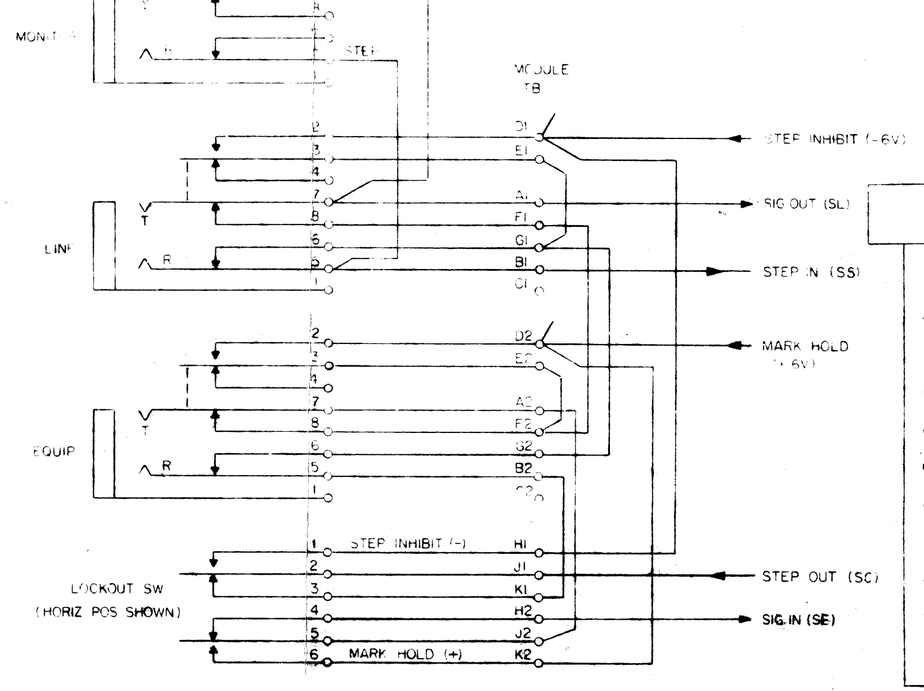
NOTE: ⊘ DENOTES TERMINATION POINT

TYPICAL STRAPPING DETAIL

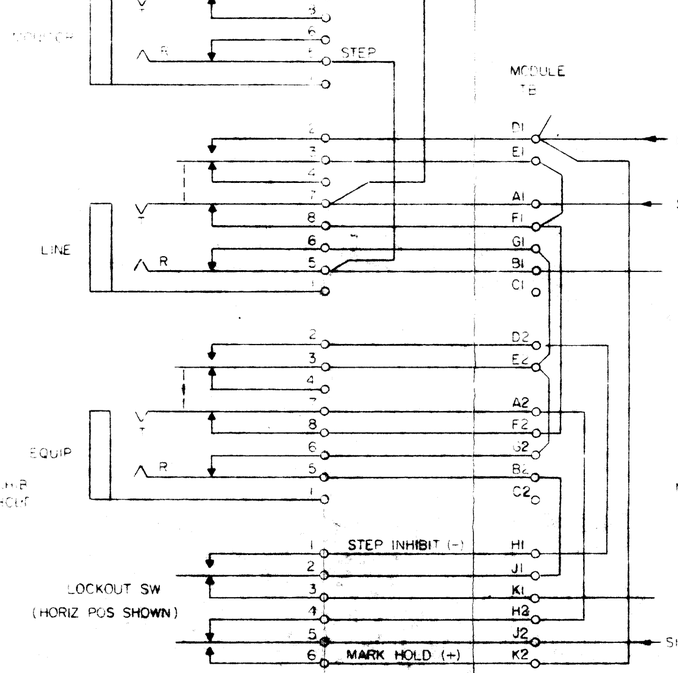
REQUIRED FOR ALTERNATE SEND/RECEIVE JACK APPEARANCES
(SEE NOTE 1)

LEGEND:

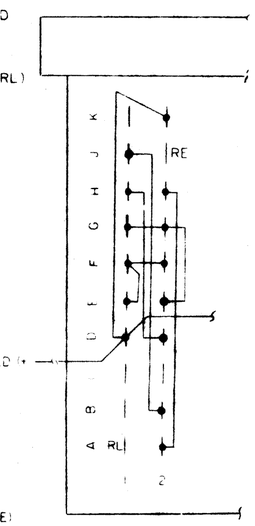
- COMMON TERMINATION ON TB
- CIRCUIT TERMINATION



TYPICAL SEND CIRCUIT SCHEMATIC



TYPICAL RECEIVE CIRCUIT SCHEMATIC

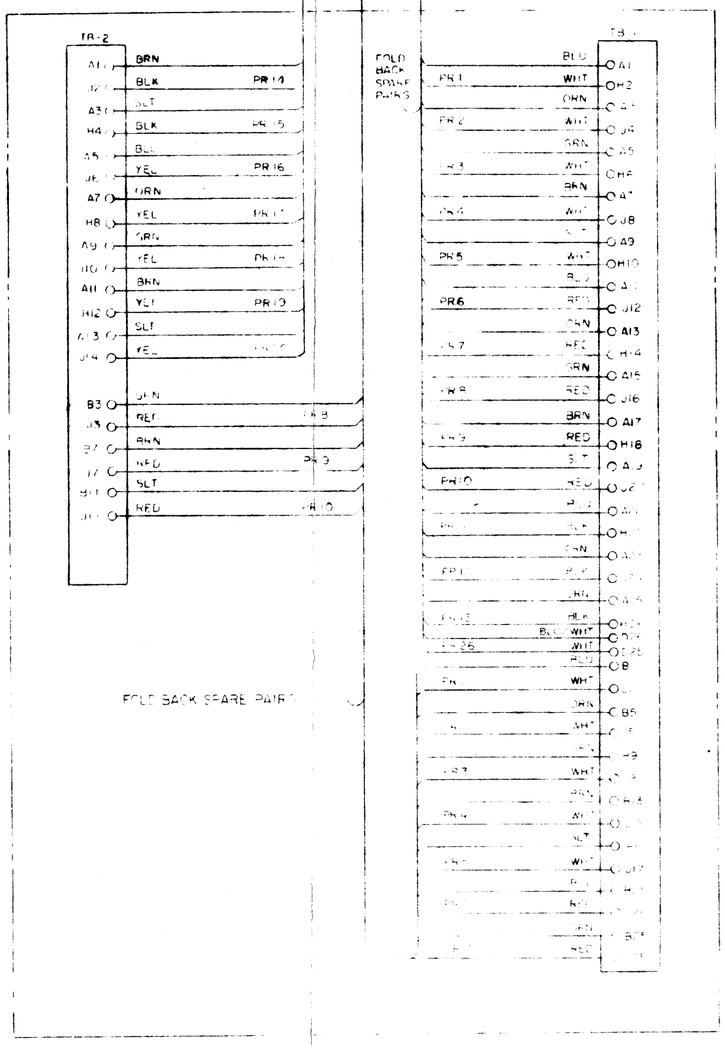


TYPICAL RECEIVE CIRCUIT NO. 7

SIZE	CODE IDENT NO	NAVELEX DRAWING NO	REV
F	29355	0103177	U
SCALE NONE		SHEET 4 OF 5	

CABLE NO. 2 STEP II PR FSN 6145-964-7464 (MIL-C-23437C)

CABLE NO. SIGNAL 26 PR FSN 6145-964-7465 MIL-C-23437C)



FOLD BACK SPARE PAIRS

CABLE NO	PR NO	COLOR CODE	FUNCTION	TERM BLK	TERM
			— DF		
	1	BLU	SEND SIG IN (SL)		
		WHT	SEND SIG OUT (SE)		
	2	ORN	REC SIG IN (RL)		
		WHT	REC SIG OUT (RE)		
	3	GRN	SEND SIG IN (SL)		
		WHT	SEND SIG OUT (SE)		
	4	BRN	REC SIG IN (RL)		
		WHT	REC SIG OUT (RE)		
	5	SLT	SEND SIG IN (SL)		
		WHT	SEND SIG OUT (SE)		
	6	BLU	REC SIG IN (RL)		
		RED	REC SIG OUT (RE)		
	7	ORN	SEND SIG IN (SL)		
		RED	SEND SIG OUT (SE)		
	8	GRN	REC SIG IN (RL)		
		RED	REC SIG IN (RE		
	9	BRN	SEND SIG IN (SL)		
		RED	SEND SIG OUT (SE)		
	10	SLT	REC SIG IN (RL)		
		RED	REC SIG OUT (RE)		
	11	BLU	SEND SIG IN (SL)		
		BLK	SEND SIG OUT (SE)		
	12	ORN	REC SIG IN (RL)		
		BLK	REC SIG OUT (RE)		
	13	GRN	SEND SIG IN (SL)		
		BLK	SEND SIG OUT (SE)		
	14	BRN	REC SIG IN (RL)		
		BLK	REC SIG OUT (RE)		
	15	SLT	SEND SIG IN (SL)		
		BLK	SEND SIG OUT (SE)		
	16	BLU	REC SIG IN (RL)		
		YEL	REC SIG OUT (RE)		
	17	ORN	SEND SIG IN (SL)		
		YEL	SEND SIG OUT (SE)		
	18	GRN	REC SIG IN (RL)		
		YEL	REC SIG OUT (RE)		
	19	BRN	SEND SIG IN (SL)		
		YEL	SEND SIG OUT (SE)		
	20	SLT	REC SIG IN (RL)		
		YEL	REC SIG OUT (RE)		
	21	BLU VIO	SPARE		
	22	ORN VIO	SPARE		
	23	GRN VIO	SPARE		
	24	BRN VIO	SPARE		
	25	SLT VIO	SPARE		
	26	+BLU WHT - WHT	TWO MARKING BY STEP SHIELD		

CABLE NO	PR NO	COLOR CODE	FUNCTION	TERM BLK	TERM
			— DF		
2	1	BLU	SEND STEP IN (SC)		
		WHT	SEND STEP OUT (SS)		
2	2	ORN	SEND STEP IN (SC)		
		WHT	SEND STEP OUT (SS)		
2	3	GRN	SEND STEP IN (SC)		
		WHT	SEND STEP OUT (SS)		
2	4	BRN	SEND STEP IN (SC)		
		WHT	SEND STEP OUT (SS)		
2	5	SLT	SEND STEP IN (SC)		
		WHT	SEND STEP OUT (SS)		
2	6	BLU	SEND STEP IN (SC)		
		RED	SEND STEP OUT (SS)		
2	7	ORN	SEND STEP IN (SC)		
		RED	SEND STEP OUT (SS)		
2	8	GRN	SEND STEP IN (SC)		
		RED	SEND STEP IN (SS)		
2	9	BRN	SEND STEP IN (SC)		
		RED	SEND STEP OUT (SS)		
2	10	SLT	SEND STEP IN (SC)		
		REC	SEND STEP OUT (SS)		
2	11	BLU BLK	SPARE		

SE — SEND SIGNAL IN FROM EQUIPMENT
SL — SEND SIGNAL TO THE LINE
RE — RECEIVE SIGNAL TO THE EQUIPMENT
RL — RECEIVE SIGNAL IN FROM THE LINE
SS — SEND STEP PULSE TO EQUIPMENT
SC — SEND STEP PULSE IN FROM CRYPTO
SPARE PAIRS GROUNDED AT DF

SIZE	CODE IDENT NO	NAVELEX SYSCOM DRAWING NO	REV
F	29355	0103177	
SCALE		SHEET OF	

TECHNICAL DATA CHART

EQUIPMENT	VOLTAGE	PHASE	FREQUENCY	WATTS	AMPS	HEAT DISSIPATION WATTS	HEAT DISSIPATION BTU/HRS	WEIGHT UNCRATED	AMB TEMP	HUMIDITY	AUDIO FREQ INPUT SIGNAL	OPERATING FREQUENCIES	MAX KEYING SPEEDS	OUTPUT
AN/URA-17	105,115, OR 125 VAC	1	50-400 HZ	70	.65	70	238	60 LBS	0 -50 C		600 OHM LINE 60 MICRO WATTS TO 60 MILLI WATTS POWER	NARROW SHIFT, 1000 HZ MEAN FREQ, WIDTH OF SHIFT 10 TO 2000 HZ. WIDE SHIFT, 2550 HZ MEAN FREQ, WIDTH OF SHIFT, 200 TO 1000 HZ AN/URA-53 WIDE SHIFT, 2000 HZ MEAN FREQ., WIDTH OF SHIFT 200 TO 1000 HZ	100 WPM SINGLE CHANNEL 400 WPM 4 CHANNEL MULTIPLEX AN/URA-17 & AN/URA-53	KEYS 60 MA CURRENT IN TELETYPE PRINTER D.C. LOOP AN/URA-17 AND AN/URA-53
AN/URA-53	105,115, OR 125 VAC	1	50-400 HZ	70	.65	70	238	60 LBS	0 -50 C					

TABLE - I

COMPARATOR-CONVERTER GROUP AN/URA-17, EQUIPMENT AND PUBLICATIONS REQUIRED BUT NOT SUPPLIED

QUANT PER EQUIP	NOMENCLATURE NAME	REQUIRED USE	REQUIRED CHARACTERISTICS
2	STANDARD NAVY RADIO RECEIVER	TO RECEIVE FREQUENCY-SHIFTED RF SIGNALS AND DELIVER FREQUENCY-SHIFTED AF SIGNALS TO INPUT OF COMPARATOR-CONVERTER GROUP AN/URA-17, AN/URA-53	FREQUENCY-SHIFTED AF OUTPUT OF 600 OHMS IMPEDANCE, AND UP TO 60 MILLIWATTS POWER.
-	TECHNICAL MANUAL FOR EACH RECEIVER USED.	FOR OPERATING INSTRUCTIONS	
1	TELETYPE PRINTER, OR OTHER AUTOMATIC RECORDER	TO RECORD MESSAGES REPRESENTED BY THE KEYED OUTPUT OF THE AN/URA-17, AN/URA-53	KEYING LOOP CURRENT OF 60 MA. DC.

COMPARATOR-CONVERTER GROUP AN/URA-17, AN/URA-53

EQUIPMENT MAJOR COMPONENT NOMENCLATURE

QUANT PER EQUIP	EQUIPMENT SUPPLIED NAME	DESIGNATION
2	FREQUENCY SHIFT CONVERTER	CV-483/URA-17
2	CLAMPS FOR TABLE MOUNTING AN/URA-17	
8	FEET FOR TABLE MOUNTING FREQUENCY SHIFT CONVERTER CV-483/URA-17	
4	BRACKET FOR RACK MOUNTING FREQUENCY SHIFT CONVERTER CV-483/URA-17	
6	CABLE CONNECTOR	UG-880/U
2	CABLE CONNECTOR	MS3106A14S-7S
2	CABLE CONNECTOR	MS3106A14S-7P
2	CABLE CONNECTOR	MS3106A14S-9S
6	CLAMP, CABLE	AN/3057-6
2	TECHNICAL MANUALS	NAVSHIPS 0967-034-9012

LIST OF MATERIAL

CHECK IN COLUMN IF GOVT. FURNISHED MAT'L

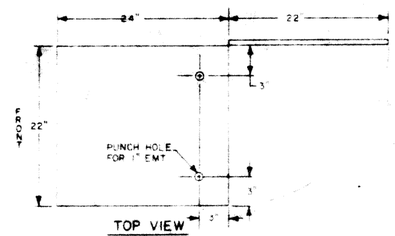
ITEM NO	QTY	DESCRIPTION	NAVY OR COMM. DESIGNATION	GFM
1	1	CABINET ELECT., EQUIP. CY-5596A/G, CY2675/U OR EQUAL		
2	AR	CABLE, POWER 1 CONDUCTOR TYPE W		
3	AR	CABLE, POWER SJ 14 GAUGE 3 CONDUCTOR		
4	AR	CABLE, COAXIAL RG-58 C/U		
5	AR	CABLE, SIGNAL, 3 PR INDIVID SHIELD	FSN 1N6145-914-5253	
6	2	BLOCK, TERMINAL, 6 X 26 CONNECTIONS		
7	2	ROD, STEEL, 3/4" X 10"		
8	4	CLAMP, STEEL, 3/4"		
9	12	SCREW, MACH., F.H. NO. 10-32 X3/4"		
10	12	WASHER, FLAT, NO. 10		
11	12	WASHER, LOCK, NO. 10		
12	12	NUT, H.H. NO 10-32		
13	2	STEEL BAR, 1/8" X 1" X 19"		
14	AR	CONDUIT, EMT 1"		
15	2	CONNECTOR, EMT, COMPR 1" W/LOCKNUTS		
16	AR	INSERT, AFTER SET ... FOR ... CELL		
17	AR	REDUCER, INSERT, 2" TO 1"		
18	2	SCREW, BINDING HD 10-32 X 1 1/2		
19	AR	MOLDING, CORE BASE		
20	AR	BUSHING, TYPE SBI, 1"		
21	1	CONNECTOR, AC 3 PRONG		
22	AR	FERRULE, MYRING, INNER	BURNDY YIC-109	
23	AR	FERRULE, MYRING, OUTER	BURNDY YOK-110	
24	AR	LUG, CRIMP, TYPE YAE	BURNDY 12N4	
25	AR	LUMBER, SFS, FIR 4" X 4"		
26	4	BOLT, MACHINE, H.H. NO. 1/8" X 16 X (LENGTH TO SUIT)		
27	16	WASHER, FLAT NO. 3/8		
28	8	NUT, H.H. 3/8"-16		
29	4	ANCHOR, SELF DRILL, NO. 3/8"-16 X 1 1/2"		
30	4	THREADED ROD, 3/8"-16 (LENGTH TO SUIT)		
31	8	WASHER, LOCK, 3/8"		
32	4	SCREW, LAG 3/8" X 1 1/2"		

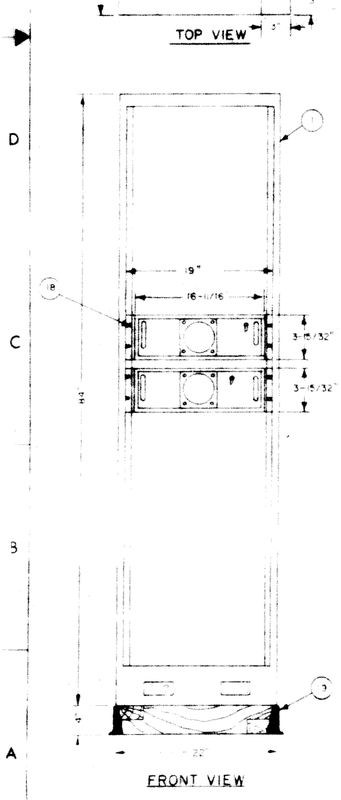
REVISIONS

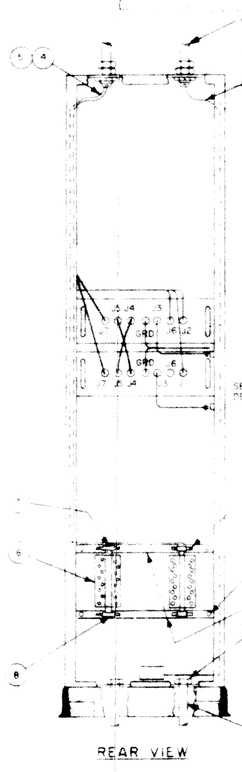
ZONE SYM	DESCRIPTION	DATE	APPROVED

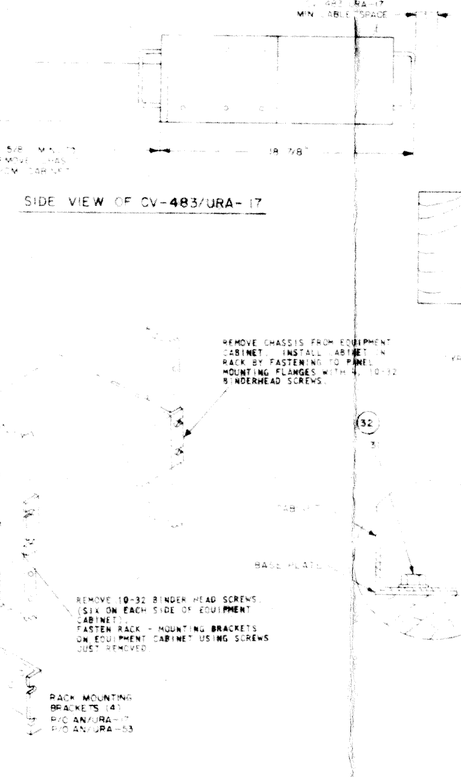
NOTES

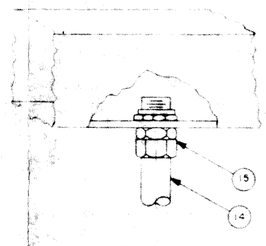
1. POWER CABLE GAUGE AND CONDUIT SIZE MAY VARY WITH LENGTH OF CABLE RUN AND SYSTEM POWER REQUIREMENTS.
2. EXCEPT WHERE SPECIFIED OTHERWISE IN THIS PLAN SIGNAL CABLE SHIELDS ARE TO BE FLOATED AT THE EQUIPMENT AND GROUNDED AT THE IDF ONLY. FOLD BACK SPARE PAIRS AT EQUIPMENT TERMINAL BLOCK LEAVING SUFFICIENT LENGTH TO REACH ANY TERMINAL. TERMINATE AND GROUND SPARE PAIRS AT IDF.
3. ALL WIRE TERMINATIONS ON SCREW TYPE TERMINALS SHALL BE EFFECTED BY THE APPROPRIATE SIZE CRIMP TYPE LUG.
4. FIELD CHANGES AN/URA-17, AN/URA-53 - TABLE 6
5. GROUND EQUIPMENT CABINET TO STATION ELECTRICAL GROUND.
6. CONDUIT MAY BE INSTALLED EITHER TO OVERHEAD DUCT OR TO UNDER FLOOR CELL DEPENDING ON INDIVIDUAL STATION REQUIREMENTS.

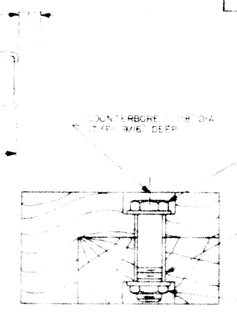


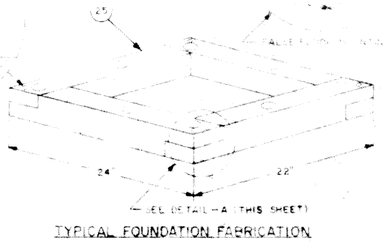












NO	APPROVAL	REFERENCES	DRAWING NO.
1		TECH MAN, COMPARATOR CONV GROUP AN/URA-17 & 53, NAVSHIPS 0967-034-9012	

PROJECT ENG
SECTION HEAD
BRANCH HEAD
DIVISION HEAD
DRAFTING SECT
DRAWN

NAVAL ELECTRONIC SYSTEMS COMMAND
WASHINGTON D.C. 20390

GENERAL SERVICE

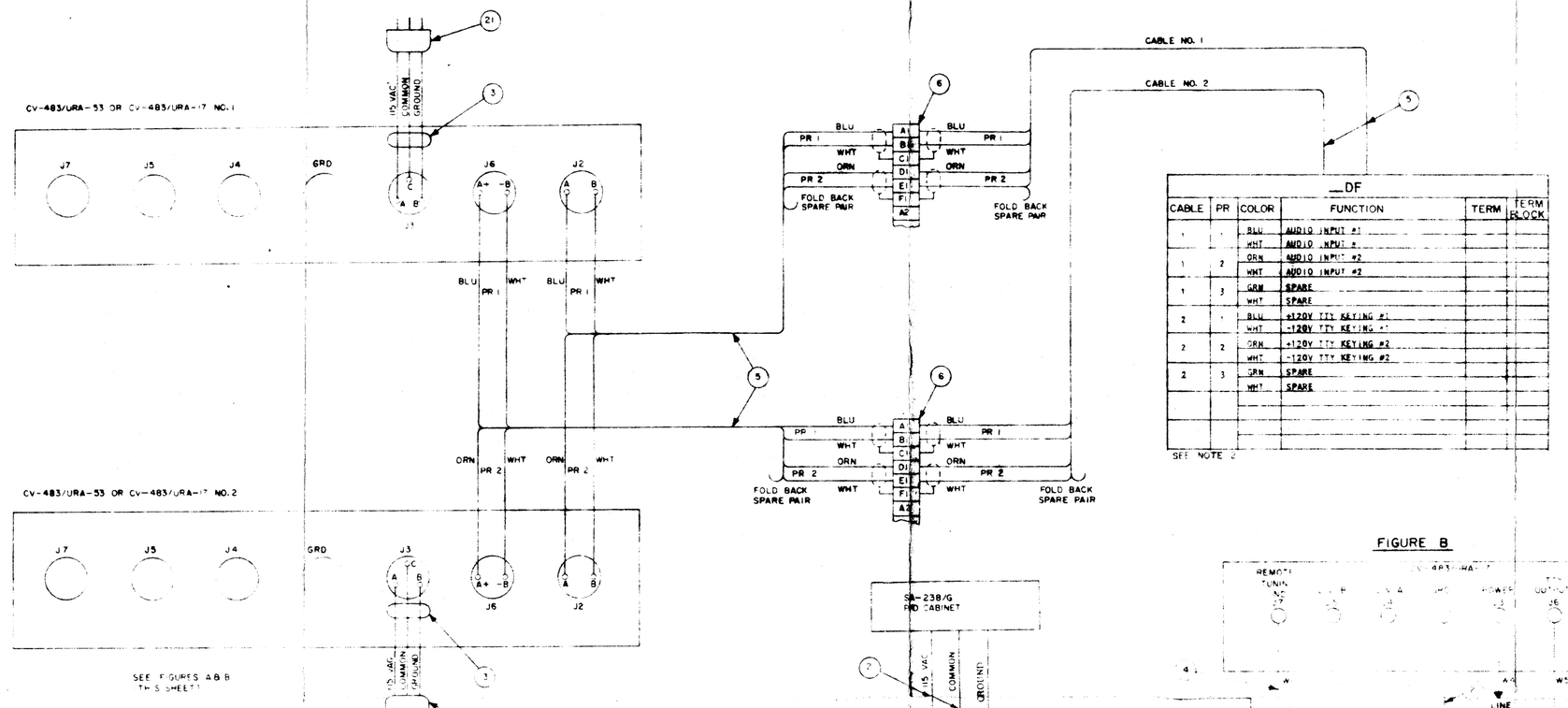
STANDARD PLAN
CONVERTER COMPARATOR GROUP AN/URA-17, AN/URA-53
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO	DRAWING NO	REV
F	NAVELEXSYSCOM	RW 10F 2337	

SCALE NONE SHEET OF 2

NEW NAVSEC 4 21 104 4.0

III 103



__DF

CABLE	PR	COLOR	FUNCTION	TERM	TERM BLOCK
1	1	BLU	AUDIO INPUT #1		
		WHT	AUDIO INPUT #1		
1	2	ORN	AUDIO INPUT #2		
		WHT	AUDIO INPUT #2		
1	3	GRN	SPARE		
		WHT	SPARE		
2	1	BLU	+120V TTY KEYING #1		
		WHT	-120V TTY KEYING #1		
2	2	ORN	+120V TTY KEYING #2		
		WHT	-120V TTY KEYING #2		
2	3	GRN	SPARE		
		WHT	SPARE		

SEE NOTE 2

POWER CABLE CHART (SEE NOTE)

CABLE P/N FEET	50	100	150	200	250	EQUIPMENT	STOCK NO	MFR NO	TYPE
WIRE SIZE IN AWG	12	12	12	10	10				TW

TABLE 2

P/O AN/URA-17 & 53

CABLING REQUIRED FOR SINGLE RECEIVER OPERATION *

CABLE NO.	PLUG CONN DESIGNATION	CONNECTIONS PIN NO.	TERMINATIONS FROM	TO
W1	MS3106A14S-7P	A B	AUDIO INPUT CONNECTOR J2	FSK RECEIVER
W2	MS3106A14S-7S	A & C B (GRD)	POWER INPUT CONNECTOR J3	LINE VOLTAGE SOURCE
W5	MS3106A14S-9S	A + 120V B - (GRD)	TTY OUTPUT CONNECTOR J6	TELETYPE PRINTER KEYING LOOP
W4**	JG-88D/U		REMOTE TUNING IND CONNECTOR J7	REMOTE TUNING INDICATOR
W7			GRD TERMINAL	CABINET ELECTRICAL GROUND

*USE IN CONJUNCTION WITH FIGURE B.
**REQUIRED ONLY WHEN REMOTE TUNING INDICATOR IS USED.

TABLE 3

P/O AN/URA-17 & 53

CABLING OF EACH CONVERTER FOR DIVERSITY OPERATION *

CABLE TYPE	PLUG CONN DESIGNATION	CONNECTIONS PIN NO.	TERMINATIONS FROM	TO
W1	MS3106A14S-7P	A B	AUDIO INPUT CONNECTOR J2	FSK RECEIVER
W2	MS3106A14S-7S	A & C B - GRD	POWER INPUT CONNECTOR J3	LINE VOLTAGE SOURCE
W5**	MS3106A14S-9S	A + 120V B - GRD	TTY OUTPUT CONNECTOR J6	TELETYPE PRINTER KEYING LOOP
W3**	JG-88D/U		DIV. A CONNECTOR J4	DIV. B, ON OTHER CONVERTER
W2**	JG-88D/U		DIV. B CONNECTOR J5	DIV. A, ON OTHER CONVERTER
W4***	JG-88D/U		REMOTE TUNING IND J7	REMOTE TUNING INDICATOR
W7			GRD TERMINAL	CABINET ELECTRICAL GROUND

*USE IN CONJUNCTION WITH FIGURE A.
**THESE CABLES REQUIRED ONLY FOR ONE CONVERTER.
***REQUIRED ONLY WHEN REMOTE TUNING INDICATOR IS USED

STANDARD PLAN
CONVERTER COMPARATOR GROUP
AN/URA-17, AN/URA-53
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO	REV
F		RW 10F 2337	

SCALE NONE SHEET 3 of 12

NSN 7540-LF-121-1041 (4-66)

EQUIPMENT MAJOR COMPONENT NOMENCLATURE

EQUIPMENT	CODE	BAUD RATE	MOTOR	TRANSMITTER DISTRIBUTOR	BASE	COVER	SET OF GEARS	SPECIAL FEATURES
TT-187/UG	7.42	45.5 55.7 74.2	LMU-3 (SYNC 60)	LXD1	LXD81	LXDC2008R		
TT-187A/UG	7.42	45.5 56.9 74.2	LMU-19 (SYNC 60)	LXD4	LXD84	LXDC201BR		MINITURIZED 67 WPM OPTIONAL
TT-187C/UG	7.42	45.5 74.2	LMU-19 (SYNC 60)	LXD30	LXD84	LXDC201BR	156658 (60 WPM) 156659 (100 WPM)	MINITURIZED WITH STEPPING MAGNETS
TT-273A/UG	7.42	45.5 74.2	LMU-38 (SYNC 50)	LXD30	LXD83	LXDC2008R		STANDARD SIZE WITH STEPPING MAGNETS
TT-570/UG	7.00	45.5 (OPT) 50.0 (OPT) 75.0	LMU-19 (SYNC 60)	LXD37	LXD820	LXDC2018R		MINITURIZED
TT-603/UG	7.42	50.0 (OPT) 45.5 (OPT) 74.2	LMU-19 (SYNC 60)	LXD38	LXD20	LXDC201BR		MINITURIZED
TT-187B/UG	7.00	45.5 50.0 75.0	LMC-19 (SYNC-60)	LXD11	LXD84	LXDC201BR	173598 161359 173595	WITH STEPPING MAGNETS
MOD KIT MK-1100/UG								ELECTRICAL SERVICE ASS'Y SIG & STEP P/O MK-1100/UG

POWER CABLE CHART

CABLE RUN FEET	50	100	150	200	250	EQUIPMENT	STOCK NO.	MFR NO.	TYPE
WIRE SIZE IN AWG	12	12	10	8	8	RELAY RACK PLUG MOLL W/TH 15 AMP CKT BREAKER AT TPP	SEE NOTE 1		Tw

TECHNICAL DATA CHART

EQUIPMENT	VOLTAGE	PHASE	FREQUENCY HZ	WATTS	AMPS RUN	AMPS START	HEAT DISSIPATION WATTS	HEAT DISSIPATION BTU/HR	WEIGHT UNCRATED (LBS)	AMB TEMP	HUMIDITY
TT-187/UG	115 VAC	SINGLE	60 HZ	65	1.85	9	50	171	36 LBS	-20 C	
TT-187A/UG	115 VAC	SINGLE	60 HZ	65	1.25	5	50	171	24 LBS	(-4 F)	
TT-187B/UG	115 VAC	SINGLE	60 HZ	65	1.25	5	50	171	24 LBS	TO	
TT-273A/UG	115 VAC	SINGLE	50 HZ	107	2.4	9	70	239	36 LBS		
TT-570/UG	115 VAC	SINGLE	60 HZ	65	1.25	5	50	171	24 LBS	+50 C	
TT-603/UG	115 VAC	SINGLE	50 HZ	65	1.25	5	50	171	24 LBS	(+122	
TT-187C/UG	115 VAC	SINGLE	60 HZ	65	1.25	5	50	171	24 LBS	F)	
MOD KIT MK-1100/UG	115 VAC TO 130 VAC	SINGLE	50 TO 60 MHZ	35							

LIST OF MATERIAL

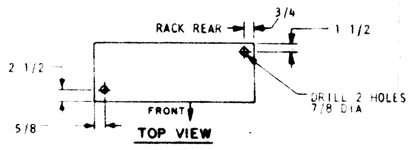
ITEM NO	QTY	DESCRIPTION	NAVY OR COMM DESIGNATION	GFM (CHECK IN COLUMN IF GOVT FURNISHED MAT'L)
1	1	RACK, ELEC, EQPT.	PARMETAL RR-197	*
2	1	OUTLET STRIP, 10 OUTLETS, 15 AMP	WIREMOLD	
		3 WIRE SGL CKT, GROUNDING TYPE	2GGB506	
		OUTLETS		
3	1	ENTR END FTG	WIREMOLD 2010A	*
4	1	BLANK END FTG	WIREMOLD 2010B	*
5	6	SCR MACH, FLH 8-32 X 3/8" LG	MS-24693-48	*
6	20	WASHER LOCK SPR NO. 8	MS-35338-42	
7	4	NUT PLAIN CAP NO. 8-32	MS-24679-2	
8	AR	CND EMT, 1/2"		
9	4	CONN CPRSN 1/2" INSUL W/LKNT	T&B 5123	*
10	1	JB W/COVER 4 3/8" X 2 3/8" X 1 1/16"	BUD CU-124	*
		EXT. DIMENSIONS, 4" X 2" X 1" ID		
		PREC. DIECAST ALUM. SEE NOTE 8		
11	1	SLIDE SHELF, 17" X 20" USEABLE	PARMETAL	*
		SPACE W/MTG HDW INCL, SCREWS	BS-2419	
12	AR	PIPE STRAP 1/2" STL	T&B 4159	*
13	2 OR 4	CONN STRAIN RELIEF 1/2" (.375-.500)	T&B 2522	*
14	2 OR 4	COIL CORD, SHIELDED 2 COND. 23 AWG	DEARBORN 932232	*
		COPPER STRAND (.225 OD)		
15	1 OR 2	PWR CORD ASSY 3 COND, RETRACTILE	BELDEN 17448	*
		12"-6', 16 AWG		
16	1 OR 2	PWR CORD ASSY, 3 COND, RETRACTILE	BELDEN 17447	*
		12"-6', 18 AWG		
17	1	SHELF EXTENDER SH STL 16 GA, 16" X 6 5/8"	QQ-S-692, CLB FIND	
18	1 OR 2	CONN STRAIN RELIEF 1/2" (.250-.375)	T&B 2521	*
19	AR	GROMMET, CONTINUOUS STRIP ELECTROVERT	GS-3CP	*
20	1	TB BARRIER TYPE, 8 TERMS, MARKED 1	MIL 3718-8	
		THRU 8 TOP STYLE 10A		
21	4	SCR MACH, PHCR NO. 6-32 X 1/2" LG	MS35206-230	
22	4	WASHER, SPR-LOCK NO. 6	MS35338-41	
23	4	NUT, HEX 6-32	MS35649-262	
24	AR	WIRE ELEC TYPE TW, EQUAL LENGTHS	BLK, WHT, GRN	
25	8	SCR, MACH PHCR 8-32 X 3/4" LG	MS35206-247	
26	8	SCR, MACH PHCR 6-40 X 3/4" LG	MS35207-232	
27	6	SCR, MACH PHCR 10-32 X LG TO SUIT	MS35207-	
28	6	WASH FLAT NO. 10	MS27183-42	
29	6	WASHER LOCK-SPRING NO. 10	MS35338-43	
30	6	NUT HEX 10-32	MS35650-302	
31	20	SCR MACH PHCR 8-32 X 1/2" LG	MS35206-245	
32	20	NUT HEX NO. 8-32	MS35694-282	
33	20	WASHER, FLAT NO. 8	MS27183-7	
34	AR	INSERT AFTER SET 2" FOR Q CELL		
35	AR	REDUCER INSERT 2" TO 1/2"		
36	20	LUG CRIMP TYPE YAE	BURNDY TB N24	
37	3	WIRE NUTS	T&B PT-1	
38	AR	CABLE SIG, 6 PRS, 22 AWG SOLID	PMC 621-206	
		COPPER, OVERALL SHIELD		
39	AR	CABLE SIGNAL 3 PRS 22 AWG SOLID	PMC 621-203	
		COPPER, OVERALL SHIELD		
40	1	TB, ONE TERM	KULKA 20001	
		* = "OR EQUAL"		

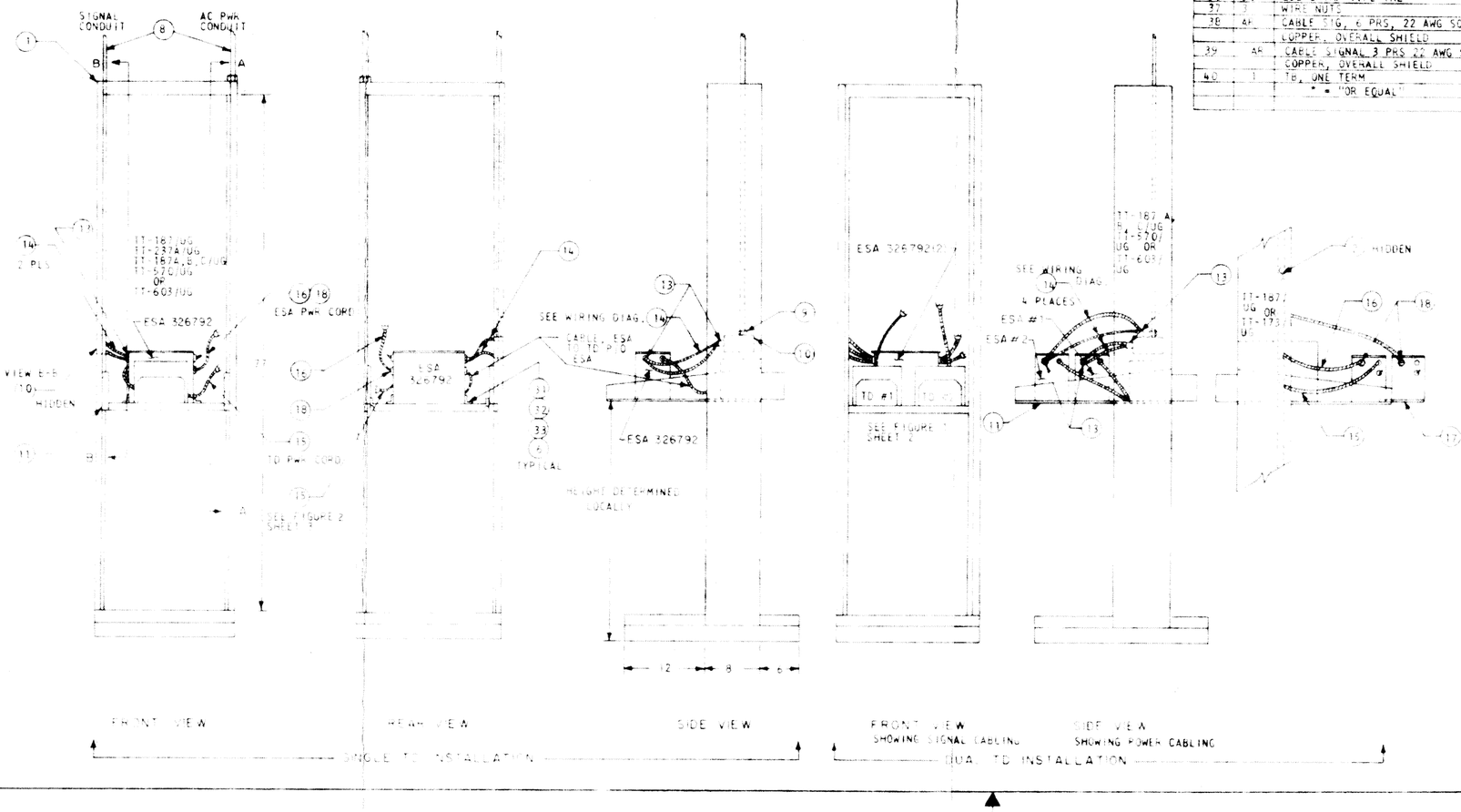
REVISIONS

ZONE	SYM	DESCRIPTION	DATE	APPROVED
SHT 1,2 & 3	A	LOM & ALL DWGS CHANGED TO REFLECT USE OF RETRACTILE TYPE CABLES IN LIEU OF LIQUIDTIGHT FLEXIBLE CND. WIRING DIAGRAMS CHANGED TO REFLECT USE OF OVERALL SHIELDED CABLE IN LIEU OF INDIVIDUAL SHIELDED PAIR CABLE, RETRACTILE TYPE POWER CORDS SHOWN PLUGGING DIRECT INTO POWER OUTLET STRIP. USE OF JUNCTION BOX AT TRANSITION BETWEEN SOLID & RET. CABLE AND RETRACTILE TYPE SHOWN		
SHT 2		CHANGED MAJOR (OPT) NOMENCLATURE TABLE FOR TT-603/UG		
G7		ADDED NOTATIONS & LOM ITEMS 25, 26		
D5		CHANGED SHELF EXTENDER ITEM 19 TO READ ITEM 17		
B2		ADDED CIRCLE AT LOM ITEM 19		
D3		ADDED WIRE COLORS		
F3		ADDED WIRE COLORS		

NOTES:

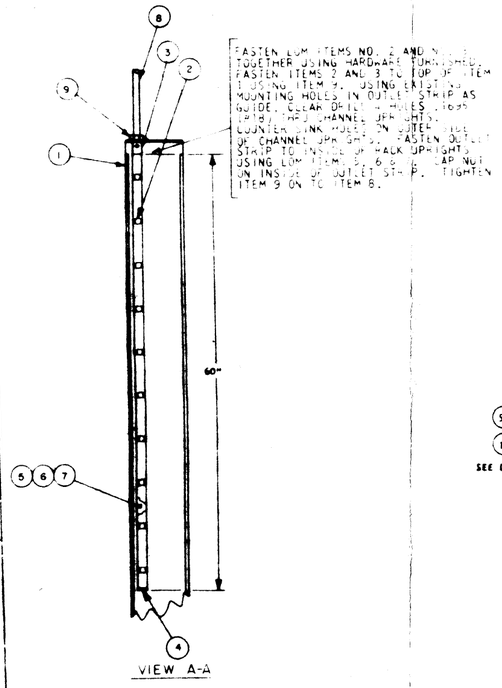
1. POWER CABLE GAUGE WILL VARY WITH LENGTH OF RUN, SEE CABLE CHART.
2. ALL SIGNAL CABLE SHIELDS WILL BE GROUNDED AT THE IDF ONLY.
3. ALL SPARE PAIRS WILL BE TERMINATED AND GROUNDED AT THE IDF.
4. ALL WIRE TERMINATIONS ON SCREW TYPE TERMINALS WILL BE BY CRIMP TYPE LUG OF APPROPRIATE SIZE FOR THE WIRE GAUGE.
5. CONDUIT MAY BE INSTALLED EITHER TO OVERHEAD DUCT OR TO UNDERFLOOR Q CELL DEPENDING ON INDIVIDUAL STATION REQUIREMENTS.
6. QTY NUMBERS IN LOM AFTER "OR" ARE REQUIRED IF DUAL TD INSTALLATION IS USED.
7. ASTERISK IN GFM COLUMN INDICATES "OR EQUAL".
8. DEPTH DIMENSION OF JUNCTION BOX, MEASURED EXTERNALLY, SHOULD NOT EXCEED 1 7/8" FOR PROPER CLEARANCE OF SLIDE SHELF WITH DUAL MOUNTED TTY EQUIPMENTS.
9. IN MULTIPLE UNIT INSTALLATIONS IN ONE RACK, MAINTAIN A SPACING BETWEEN MOUNTING SHELVES EQUAL TO AT LEAST THE HEIGHT OF THE UNIT TO BE MOUNTED PLUS SIX INCHES.



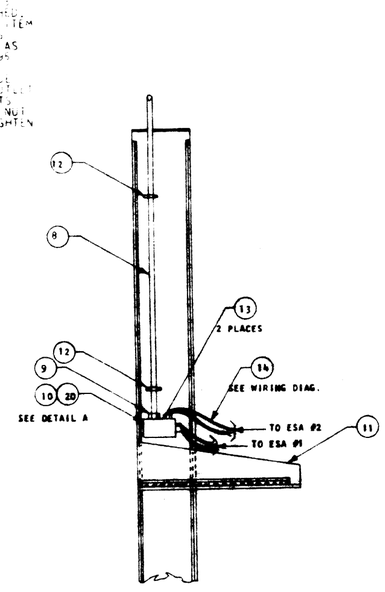


NAVELEX STANDARD PLAN NO. 0100369A	NAVAL ELECTRONIC SYSTEMS COMMAND	REFERENCES	DRAWING NO.
DRAWN	PROJ ENGR	GENERAL SERVICE	FOR SHORE USE
CHECKED	PROJECT	STANDARD PLAN	
ACC ENGR	SECT HEAD	TT-187, 187A, 187B, 187C, 273A, 570 & 603/UG SINGLE AND DUAL RACK MOUNTED LOW LEVEL OPERATION INSTALLATION AND WIRING DETAILS	
APPROVED	DATE	SIZE (CODE IDENT NO) F	REV
SECURITY CLASS		SCALE	SHEET 3 OF 3

REVISIONS			
ZONE SYM	DESCRIPTION	DATE	APPROVED



VIEW A-A



VIEW B-B

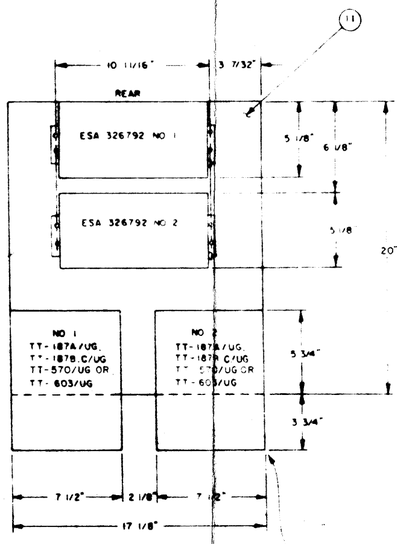
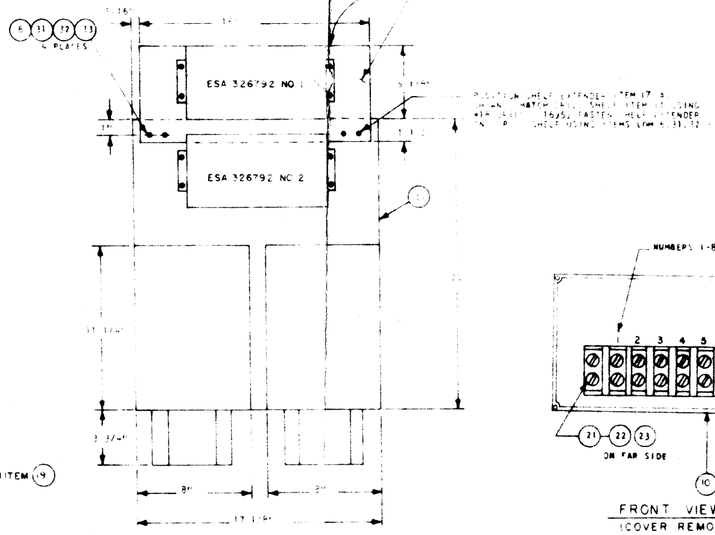


FIGURE 1

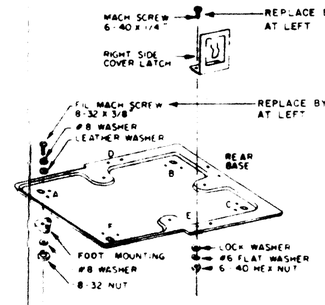


DUAL EQUIPMENT MOUNTING DETAILS

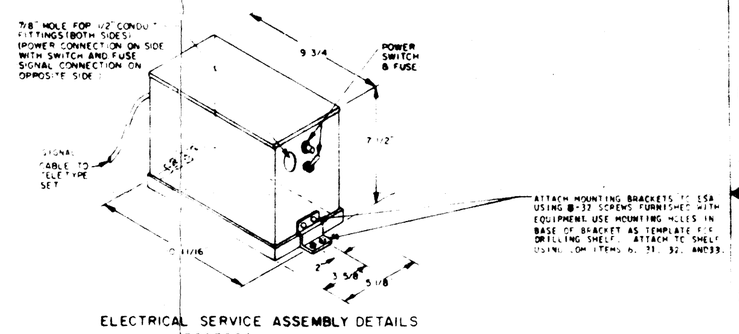
MOUNTING INSTRUCTIONS DUAL TDS

DETAIL "B" SHOWS EXISTING HARDWARE WHICH IS PART OF EACH MINIATURIZED BASE ASSEMBLY.

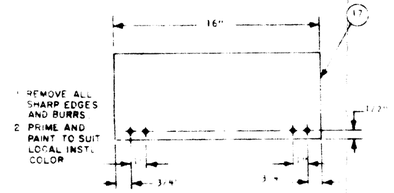
1. REMOVE FOUR FOOT MOUNTINGS AT POSITIONS A, B, C, AND F. SET ASIDE AND SAVE.
2. SET ASIDE AND SAVE, THE FOUR 8-32 X 3/8" FIL MACHINE SCREWS, 2 OF THE FOUR 8-32 NUTS, 2 OF THE FOUR LEATHER WASHERS, 2 OF THE WASHERS AT SCREW HEAD END; AND 2 OF THE WASHERS AT NUT END.
3. REMOVE, SET ASIDE AND SAVE 2, 6-40 X 1/4" COVER LATCH RETAINING SCREWS AT POSITIONS D AND C.
4. RETAIN ALL OTHER PIECES OF HARDWARE.
5. USING THE BASE PLATE AS A GUIDE MAKE A PAPER TEMPLATE OUTLINING THE BASE POSITIONED AS SHOWN IN FIG. 1.
6. CLEAR DRILL SHELF .1695 (#18 DRILL) AT TEMPLATE HOLES B AND C.
7. CLEAR DRILL SHELF .1440 (#27 DRILL) AT TEMPLATE HOLES D AND E.
8. SECURE TELETYPEWRITER TO SLIDING SHELF USING LOM ITEMS 25 AND 26 AND THE PIECES OF HARDWARE RETAINED FROM ORIGINAL MOUNTING.
9. POSITION ESA326792 NOS. 1 AND 2 AS SHOWN IN FIGURE 1 USING HOLES IN MOUNTION BRACKETS AS TEMPLATE DRILL SHELF AND SECURE ESA'S WITH HARD WARE SUPPLIED.



DETAIL B
MINIATURIZED BASE ASSEMBLY OF TT-187A/UG, TT-187C/UG TT-570/UG AND TT-603/UG

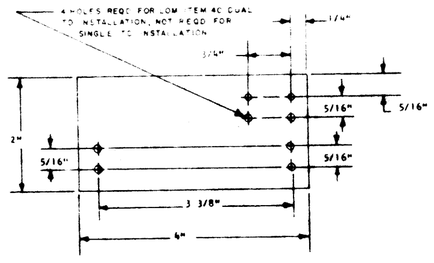


ELECTRICAL SERVICE ASSEMBLY DETAILS
(326792)

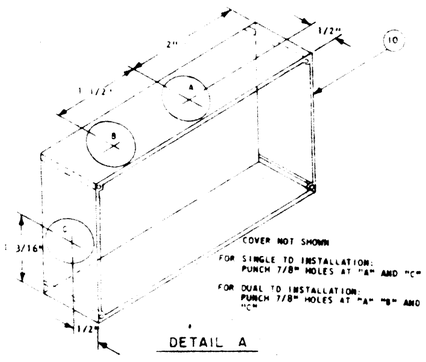


DRILLING AND FABRICATION DETAIL
SHELF EXTENDER

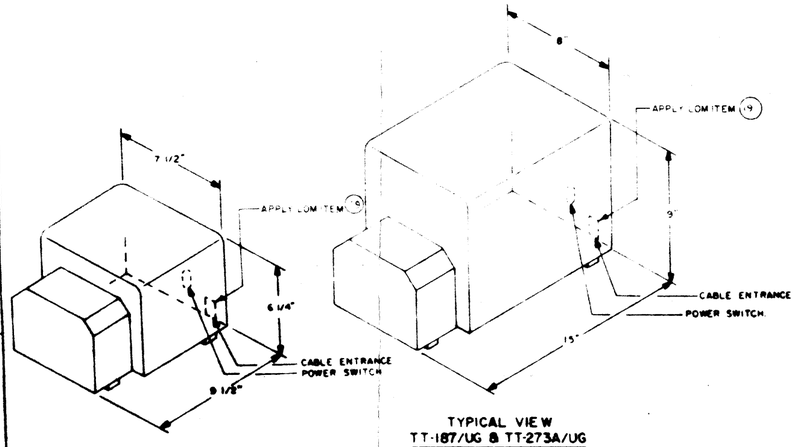
FRONT VIEW
(COVER REMOVED)



HOLE PATTERN DETAIL
REAR VIEW



DETAIL A



TYPICAL VIEW
TT-187A/UG, TT-187B,C/UG,
TT-570/UG & TT-603/UG

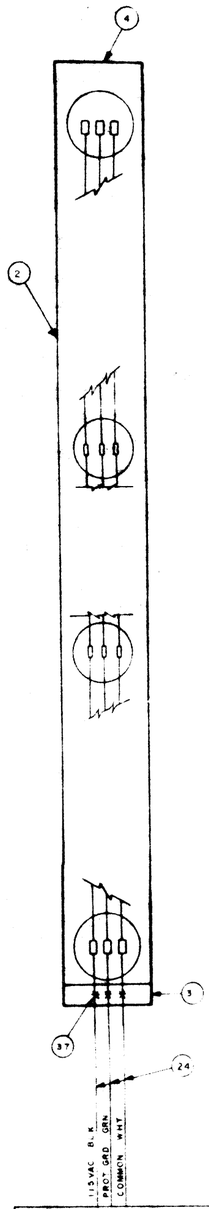
TYPICAL VIEW
TT-187/UG & TT-273A/UG

STANDARD PLAN
TT-187, 187A, 187B, 187C, 273A, 570 & 603/UG SINGLE AND DUAL RACK MOUNTED LOW LEVEL OPERATION
INSTALLATION AND WIRING DETAILS

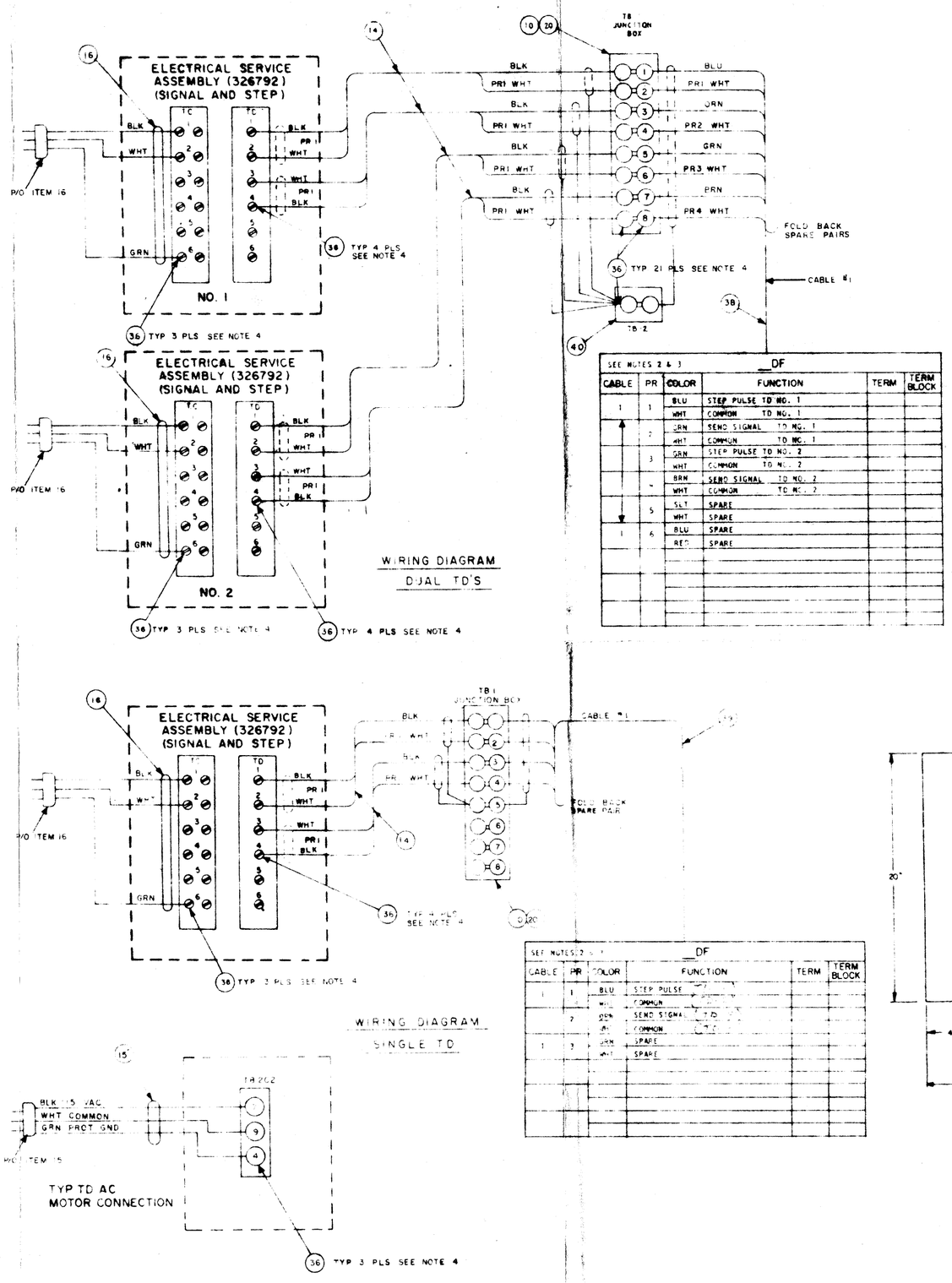
NAVELEX STANDARD PLAN NO
0100369A

SIZE F | CODE IDENT NO | SCALE NONE | SHEET 2

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVED



TECH PWR DIST PNL NO		
EQUIPMENT	BKR NO	AMPS
RR-187 NO.		



WIRING DIAGRAM
DUAL TD'S

SEE NOTES 2 & 3 — DF

CABLE	PR	COLOR	FUNCTION	TERM	TERM BLOCK
1	1	BLU	STEP PULSE TO NO. 1		
		WHT	COMMON TO NO. 1		
	2	GRN	SEND SIGNAL TO NO. 1		
		WHT	COMMON TO NO. 1		
	3	GRN	STEP PULSE TO NO. 2		
		WHT	COMMON TO NO. 2		
	4	BRN	SEND SIGNAL TO NO. 2		
		WHT	COMMON TO NO. 2		
	5	SLT	SPARE		
		WHT	SPARE		
1	6	BLU	SPARE		
		RED	SPARE		

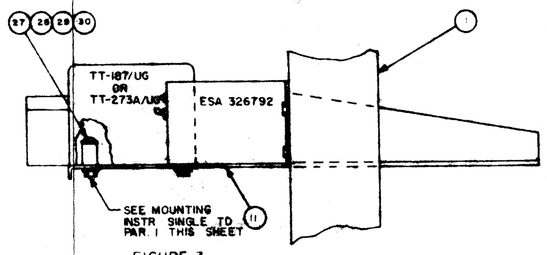


FIGURE 3

WIRING DIAGRAM
SINGLE TD

SEE NOTES 2 & 3 — DF

CABLE	PR	COLOR	FUNCTION	TERM	TERM BLOCK
1	1	BLU	STEP PULSE		
		WHT	COMMON		
	2	GRN	SEND SIGNAL TO		
		WHT	COMMON TO		
1	3	GRN	SPARE		
		WHT	SPARE		

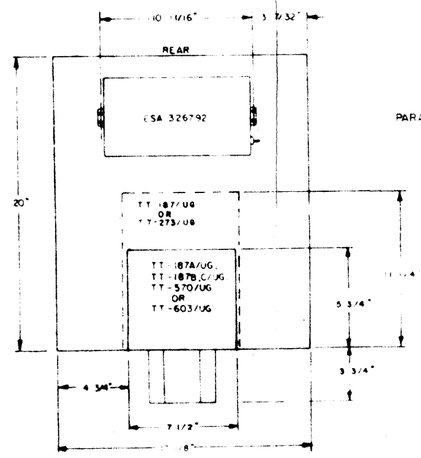


FIGURE 2

MOUNTING INSTRUCTIONS, SINGLE TD

1 WHEN MOUNTING TT-187/UG OR TT-273A/UG AND ESA326792 ON SLIDING SHELF POSITION EQUIPMENT AS SHOWN IN FIGURE 2. EQUIPMENT MAY BE MOUNTED TO SHELF BY EXTENDING LENGTH OF SCREW WHICH BOLTS EQUIPMENT TO BASE PLATE. THE SCREWS ARE THROUGH EACH OF THE SHOCK MOUNTS. SEE FIGURE 3.

2 WHEN MOUNTING TT-187A/UG, TT-187B, C/UG, TT-507/UG, OR TT-603/UG AND ESA326792 ON SLIDING SHELF POSITION EQUIPMENT AS SHOWN IN FIGURE 2. SECURE EQUIPMENT IN SAME MANNER AS FOR DUAL TD'S SHOWN ON SHEET 2.

STANDARD PLAN
TT-187, 187A, 187B, 187C, 273A, 270 & 603/UG SINGLE AND DUAL RACK MOUNTED LOW LEVEL OPERATION
INSTALLATION AND WIRING DETAILS

NAVELEX STANDARD PLAN NO
0100369A

SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO	REV
F			

SCALE NONE — SHEET 3

1 EQUIPMENT	CODE	BAUD	MOTOR	2 TYPING UNIT	TYPING REPERFORATOR	TYPING PERFORATOR	3 TRANSMITTER DISTRIBUTOR	CABINET / COVER	BASE	E.S.U.	4 KEYBOARD	SPECIAL FEATURES
AN/UGC-6	7 42	45.5 56.9 74.2	PD-67/U & PD-17A/U (SYNCHRO 60 CYCLES)	MT-1158/UG	TT-266/UG	TT-252/UG	TT-251/UG	CY-2529/UG	MT-2088/UG AND MT-2234/UG	SB-959/UG AND SB-1061/UG	MX-2643/UG	
AN/UGC-6A	7 42	45.5 56.9 74.2	PD-67/U & PD-17A/U (SYNCHRO 60 CYCLES)	MX-2988/UG	TT-266/UG	TT-252/UG	TT-251/UG	CY-2529/UG	MT-2088/UG AND MT-2234/UG	SB-959/UG AND SB-1061/UG	MX-2643/UG	REPERFORATOR CONTROL
AN/UGC-6F	7 00	45.5 50.0 74.2	PD-18A/U & PD-77A/U (SEE FIG GOVERN	TT-437/UG	TT-266/UG	TT-252/UG	TT-438/UG	CY-2529/UG	MT-2088/UG AND MT-2625/UG	SB-2680/UG AND SB-1061/UG	TT-433/UG	AUTO LINE FEED
AN/UGC-48	7 42	45.5 56.9 74.2	PD-67/U & PD-76/U (SYNCHRO 60 CYCLES)	MX-1158/UG	TT-266/UG	TT-252/UG	TT-251/UG	CY-2529/UG	MT-2088/UG AND MT-2234/UG	SB-959/UG AND SB-1061/UG	MX-2643/UG	
MX-1088/UG												LOW LEVEL MODIFICATION KIT

TECHNICAL DATA CHART

EQUIPMENT	VOLTAGE	PHASE	FREQUENCY	WATTS	AMPS RUN	AMPS START	HEAT DISSIPATION WATTS	HEAT DISSIPATION BTU/HRS	WEIGHT UNCRATED	AMB TEMP	HUMIDITY
AN/UGC-6	115 VAC	SINGLE	60 HZ	293	4.43	21.25	209	500	290	-20°C (-4°F) TO +50°C (+122°F)	
AN/UGC-6A	115 VAC	SINGLE	60 HZ	293	4.43	21.25	209	500	290		
AN/UGC-6F	115 VAC	SINGLE	60 HZ	293	4.43	21.25	209	500	290		
AN/UGC-48	115 VAC	SINGLE	60 HZ	293	4.43	21.25	209	500	290		

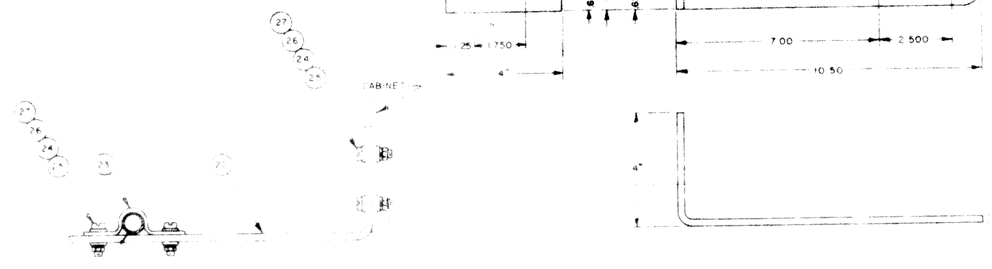
CHART INCLUDES POWER REQUIREMENTS, WEIGHT AND ENVIRONMENTAL FACTORS WITH MX-1088/UG INSTALLED)

POWER CABLE CHART (SEE NOTE 8

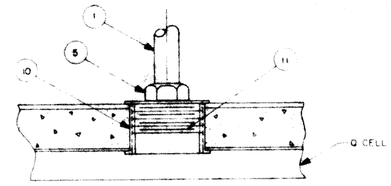
CABLE RUN FEET	50	100	150	200	250	EQUIPMENT	STOCK NO.	MFR NO.	TYPE
WIRE SIZE IN AWG	14	14	12	12	10	AN/UGC-6 AN/UGC-6A AN/UGC-6F AN/UGC-48			TW

6 LIST OF MATERIAL ITEM NO	QTY	DESCRIPTION	NAVY OR COMM DESIGNATION	CHECK (X) COLUMN IF GOV'T FURNISHED MAT'L BFM
1	AR	CONDUIT, EMT 3/4"		
2	2	UNILET 3/4" SERIES TM TYPE LB APPLETON (OR EQUIV)		
3	2	GASKET, UNILET SOLID TYPE (OR EQUIV)		
4	2	COVER, BLANK UNILET K75 (OR EQUIV)		
5	4	CONNECTOR, EMT, COMPRESSION, 3/4" W/LOCKNUTS		
6	AR	CABLE, POWER 1 CONDUCTOR, TYPE TW		
7	AR	CABLE, SIGNAL 3 PR INDIVIDUAL SHLD	FSN-1N6145-914-5153	
8	12	LUGS, CRIMP TYPE YAE	BURNDY YAE 18-N24	
9	15	LUGS, CRIMP TYPE YAE	BURNDY YAE 12-N4	
10	2	INSERT, AFTER SET, 2" FOR Q CELL		
11	2	REDUCER, INSERT, 2" TO 3/4"		
12	6	FERRULE, HYRING INNER	BURNDY YIC 109	
13	6	FERRULE, HYRING OUTER	BURNDY YOE 110	
14	1	BUSHING 1/2" INSULATED		
15	AR	CONDUIT FLEXIBLE SEALTITE 1/2"		
16	5	90° CONNECTOR 1/2", TYPE "ST" SERIES APPLETON (OR EQUIV)		
17	AR	CABLE, POWER 3 CONDUCTOR TYPE SJ 14 AWG		
18	3	WIRE NUTS	IDEAL 748	
19	2	4" UTILITY BOX		
20	1	COVER BLANK OUTLET BOX, APPLETON 8465 (OR EQUIV)		
21	2	CONNECTORS, FLEXIBLE CONDUIT 1/2" TYPE ST 50 APPLETON (OR EQUIV)		
22	2	BAR, MILD STEEL 1-1/4" X 14-1/2" X 3/16"		
23	2	STRAP, TWO HOLE EMT TYPE 3/4"		
24	8	SCREW, PANHEAD, NO. 10-32 X 3/4"		
25	8	WASHER, FLAT NO. 10		
26	8	WASHER, LOCK NO. 10		
27	8	NUT, HEX, NO. 10-32		
28	AR	EXTRA LOCKNUTS FOR ITEM 16		

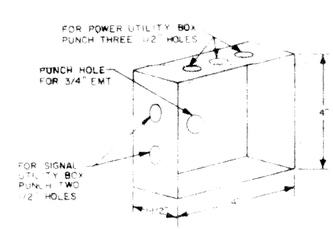
7 ZONE	REVISIONS SYM	DESCRIPTION	DATE	APPROVED
ALL	A	LIST OF MATERIAL, TECHNICAL DATA CHART, GRAPHIC DETAILS ADDED AND POWER WIRING CHANGED	2/20/68	



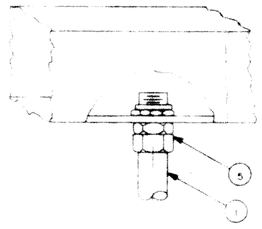
DETAIL A



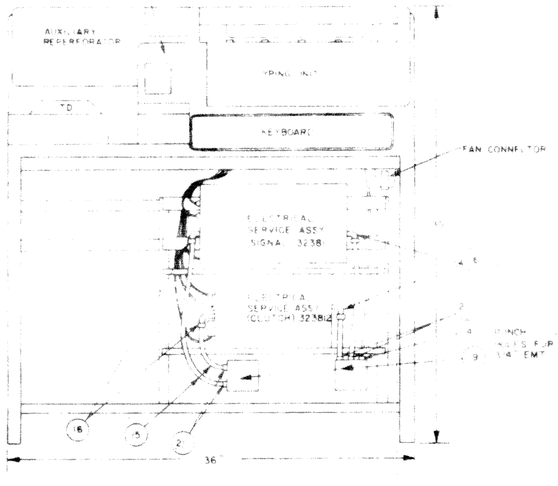
DETAIL C
TYPICAL CONDUIT INSTALLATION TO UNDER FLOOR Q CELL



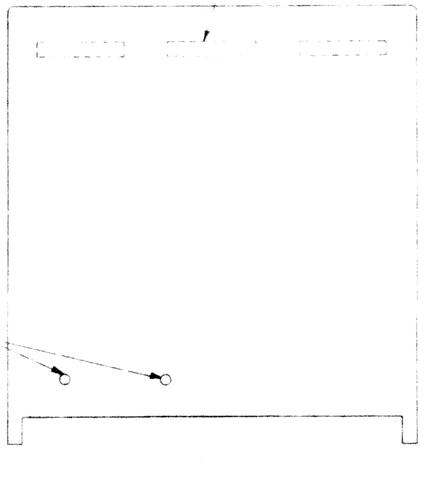
DETAIL D
UTILITY BOX



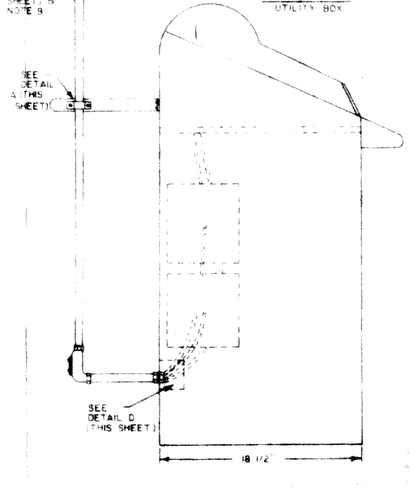
DETAIL B
TYPICAL CONDUIT INSTALLATION POWER/SIGNAL OVERHEAD DUCT



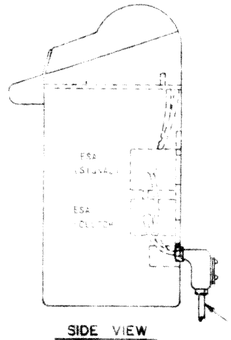
FRONT VIEW
WITH DOORS REMOVED



REAR VIEW



SIDE VIEW



SIDE VIEW

NOTES:

1. FOR EQUIPMENT AND CIRCUIT FLEXIBILITY, ALL FUNCTIONS HAVE BEEN SHOWN TERMINATED AT THE DISTRIBUTION FRAME. AFTER DETERMINING CIRCUIT OPTIONS, MAKE NECESSARY STRAPPING AT THE ELECTRICAL SERVICE ASSEMBLIES AND SELECT CABLE WITH NUMBER OF PAIRS AS REQUIRED.
2. ALL SIGNAL CABLE SHIELDS WILL BE GROUNDED AT THE IDF.
3. SPARE CABLE PAIRS WILL BE CUT TO SUFFICIENT LENGTH TO REACH ANY TERMINAL AND FOLDED BACK AT THE EQUIPMENT END. THE SPARE CABLE PAIRS WILL ALSO BE TERMINATED AT THE IDF AND GROUNDED.
4. ALL WIRE TERMINATIONS TO FILTERS OR TO TERMINAL BLOCKS WILL BE BY CRIMP TYPE LUG OF APPROPRIATE SIZE FOR THE WIRE GAUGE.
5. GROUND WIRE IS TO BE SAME SIZE WIRE GAUGE AS THAT OF POWER CABLE.
6. IF EQUIPMENT IS SUPPLIED WITH FACTORY BUILT POWER CONNECTION MODIFICATION KITS USED TO AID IN TERMINATING POWER AND SIGNAL CABLES, OR IF EQUIPMENT HAS THESE TERMINATIONS ALREADY INSTALLED, SHIELDED CONDUIT OR FLEXIBLE SHIELDED CABLE MUST BE USED TO BRING POWER AND SIGNAL LEADS INTO THE SET. CABLES WILL BE ROUTED THROUGH THE KITS TO THE ESA.
7. THIS DRAWING APPLIED ONLY TO EQUIPMENTS MODIFIED FROM HIGH LEVEL TO LOW LEVEL OPERATION BY TELETYPE MODIFICATION AS INDICATED IN REFERENCE NO. 2
8. POWER CABLE GAUGE MAY VARY WITH THE LENGTH OF CABLE RUN - SEE POWER CABLING CHART.
9. CONDUIT MAY BE INSTALLED EITHER TO OVERHEAD DUCT OR TO UNDERFLOOR Q CELL DEPENDING ON INDIVIDUAL STATION REQUIREMENTS.

REFERENCES NO.	DRAWING NO.
4 WIRING DIAGRAM PACKAGE	WDP 0049
3 WIRING DIAGRAM PACKAGE FOR 123807 MOD KITS	WDP 0042
2 INSTRUCTIONS FOR INSTALLING LOW LEVEL MOD KITS	NAVSHIPS 0967-273-3010
1 TECHNICAL MANUAL	NAVSHIPS 93834

APPROVAL	
PROJECT ENG	
SECTION HEAD	
BRANCH HEAD	
DIVISION HEAD	
DRAFTING SECT	
DRAWN	
SATISFACTORY TO	

NAVAL ELECTRONIC SYSTEMS COMMAND
WASHINGTON D.C. 20390

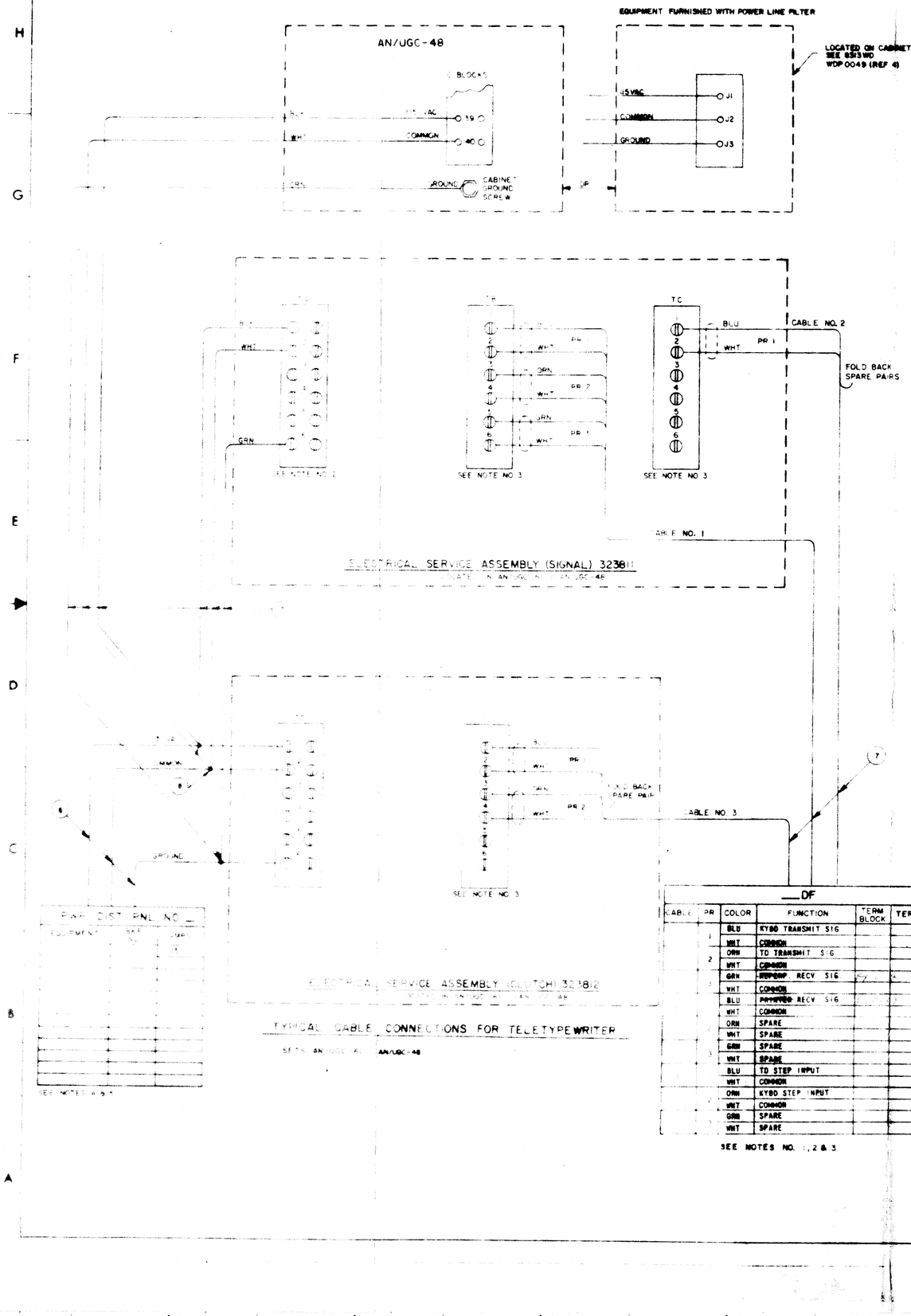
GENERAL SERVICE FOR SHORE USE

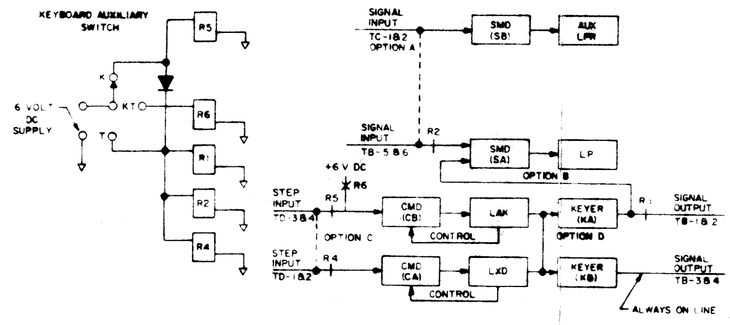
STANDARD PLAN
AN/UGC-6, AN/UGC-6A, AN/UGC-6F, AN/UGC-48 LOW LEVEL OPERATION
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO.	DRAWING NO.	REV
F	NAVELEXSYSCOM	RW 10F 2270	A

SCALE NONE SHEET 1 OF 2

NSN-NAVSEC-4127-1104 (4-66)





A. RELAY CONTACTS SHOWN WITH KEYBOARD AUXILIARY SWITCH IN "K" POSITION.

B. DASHED CIRCUITRY IS NOT SUPPLIED AS PART OF ELECTRICAL SERVICE ASSEMBLIES

C. STRAPPING OPTIONS

(1) OPTION "A" PERMITS THE SIGNAL INPUTS TO BE APPLIED TO ANY OR ALL OF THE SMD'S

(2) OPTION "B" ENABLES MONITORING OR NOT MONITORING PAGE COPY AS REQUIRED

(3) OPTION "C" PROVIDES FOR STEPPING FROM EITHER ONE OR TWO SOURCES

(4) OPTION "D" PERMITS A SEPERATE SIGNAL OUTPUT FROM THE LXD. THIS REQUIRES A SECOND KEYER CARD.

(5) FACTORY INSTALLED STRAPS ARE: STRAP FROM TC-5 TO TC 6 IN ALL SIGNAL ELECTRICAL SERVICE ASSEMBLIES (OPTION B). STRAP FROM TD-5 TO TD 6 IN ALL SIGNAL ELECTRICAL SERVICE ASSEMBLIES (OPTION D)

D. THE FOLLOWING AUXILIARY SWITCH OPERATIVE FUNCTIONS APPLY

POSIT "K"
KEYBOARD TO LLK TO LP SMD
KEYBOARD TO LLK TO OUTPUT
LXD TO LLK TO OUTPUT
BOTH CMD INPUTS
ALL SMD INPUTS

POSIT "KT"
AUXILIARY LPR SMD INPUT
KEYBOARD TO LLK TO LP SMD
KEYBOARD CMD SUPPLIED -6V INTERNALLY
MECHANICAL OPERATION OF LPR OR LTPE BY KEYBOARD FOR TAPE PREPARATION

POSIT "T"
LP AND AUXILIARY LPR SMD INPUTS
LLK OUTPUT
LXD TO LLK TO LP SMD
LXD CMD INPUT
MECHANICAL OPERATION OF LPR OR LTPE BY KEYBOARD FOR TAPE PREPARATION.

E. WITH THE KEYBOARD AUXILIARY SWITCH IN THE "K" POSITION (RELAYS R1, R2, R4, AND R6 ENERGIZED) SIGNAL INPUTS MAY BE APPLIED TO THE SELECTOR MAGNET DRIVERS (SMD'S) AND STEP INPUT TO BOTH CLUTCH MAGNET DRIVERS (CMD'S). THE SIGNAL OUTPUT FROM THE KEYER (KA) IS CONNECTED TO THE LINE

F. WITH THE KEYBOARD AUXILIARY SWITCH IN THE "KT" POSITION (RELAY "R6" ENERGIZED) THE SET IS OFF LINE EXCEPT FOR THE AUX LPR. THE PLUS (+) SIX (6) VOLTS APPLIED TO THE (CB) CMD PERMITS THE KEYBOARD TO BE OPERATED WITHOUT A STEP PULSE. INFORMATION FROM THE KEYBOARD IS TRANSLATED TO PAGE COPY AT THE TYPING UNIT (LP), AND TO PUNCHED TAPE AT THE REPERFORATOR (LTPE, WHICH IS MECHANICALLY LINKED TO THE KEYBOARD.

G. WITH THE KEYBOARD AUXILIARY SWITCH IN THE "T" POSITION (RELAYS R1, R2, AND R4 ENERGIZED) A TAPED SIGNAL MAY BE SENT ON LINE FROM THE TRANSMITTER DISTRIBUTOR IF A STEP PULSE IS AVAILABLE AT THE (CA) CMD. THESE SIGNALS ARE MONITORED BY THE LP IF OPTIONS "B" AND "D" ARE PRESENT. THE ALTERNATE INPUT TO THE (SA) SMD IS ALSO ON LINE SO THAT THE SET WILL ALSO TRANSLATE INCOMING SIGNALS TO PAGE COPY. THE SET CANNOT SIMULTANEOUSLY TRANSMIT FROM TAPE AND RECEIVE PAGE COPY UNLESS THE STRAP FROM LLK TO (SA) SMD IS REMOVED

SIGNAL AND STEPPING PULSE FLOW DIAGRAM WITH STRAPPING OPTIONS AND AUXILIARY SWITCH FUNCTIONS

LEGEND:

LP - PRINTER
LAK - KEYBOARD
LXD - TRANSMITTER DISTRIBUTOR
SMD - SELECTOR MAGNET DRIVER
CMD - CLUTCH MAGNET DRIVER
LLK - LOW LEVEL KEYER
LTPE - KEYBOARD REPERFORATOR
LPR - REPERFORATOR

STANDARD PLAN
AN/UGC-6, AN/UGC-6A, AN/UGC-6F AN/UGC-48 LOW LEVEL OPERATION
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO	REV
F		RW 10F 2270	A

SCALE NONE SHEET 2 OF 2

NSN-NAVSEC-4121-186 (4-68)

EQUIPMENT MAJOR COMPONENT NOMENCLATURE

EQUIPMENT	CODE	BAUD RATE	MOTOR	TRANSMITTER DISTRIBUTOR	BASE	COVER		SPECIAL FEATURES
AN/UGR-9	7.42	45.5 50.0 74.2	LMU-37 (SYNCHRO 60 HZ)	LP-111RN-AY	LLB1	LPCA01BR		POWER LINE FILTER AND VARIABLE SPEED MECHANISM
AN/UGC-25X	7.42	45.5 50.0 74.2	LMU-51 (SYNCHRO 50 HZ)	LP-111RN-AY	LLB2	LPCA01BR		POWER LINE FILTER AND VARIABLE SPEED MECHANISM
MOD KIT MK-1090/UG								ELECTRICAL SERVICE ASSY. (SIGNAL P/O MK-1090/UG)

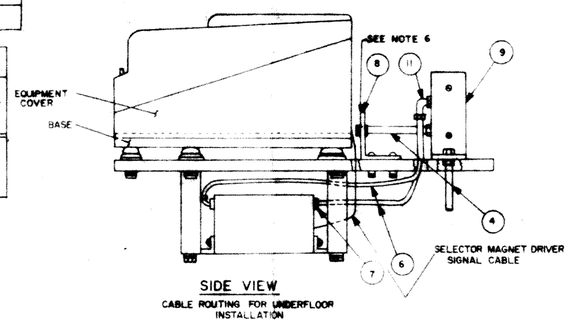
TECHNICAL DATA CHART

EQUIPMENT	VOLTAGE	PHASE	FREQUENCY	WATTS	AMPS		HEAT DISSIPATION		WEIGHT UNCRATED	AMB TEMP	HUMIDITY
					RUN	START	WATTS	BTU/HRS			
AN/UGR-9	115VAC±10%	SINGLE	60 HZ	110	1.90	9.00	58	198	65 LBS.	-20°C (-4°F) TO 50°C (+122°F)	
AN/UGC-25X	115VAC±10%	SINGLE	50 HZ	152	2.40	9.00	78	267	65 LBS.		

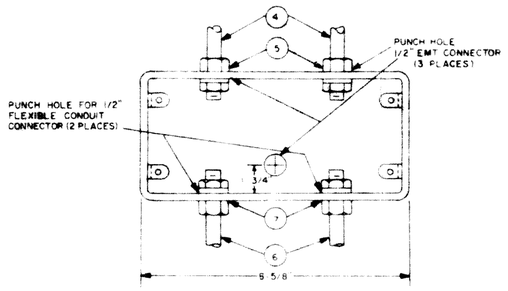
THIS CHART INCLUDES POWER REQUIREMENTS, WEIGHTS AND ENVIRONMENTAL FACTORS WITH MK-1090/UG INSTALLED

POWER CABLE CHART (SEE NOTE 6)

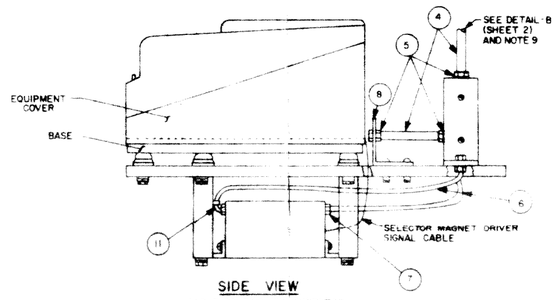
CABLE RUN FEET	50	100	150	200	250	EQUIPMENT	STOCK NO.	MFR NO.	TYPE
WIRE SIZE IN AWG	14	14	12	12	10	AN/UGR-9 AN/UGC-25X			TW



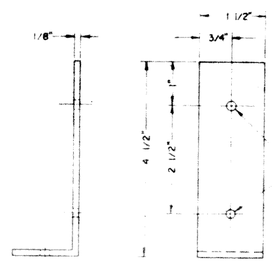
SIDE VIEW
CABLE ROUTING FOR UNDERFLOOR INSTALLATION

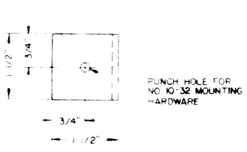


UTILITY BOX DETAIL
FOR OVERHEAD DUCT INSTALLATION
REAR VIEW W/COVER REMOVED

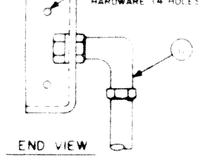


SIDE VIEW
CABLE ROUTING FOR OVERHEAD INSTALLATION

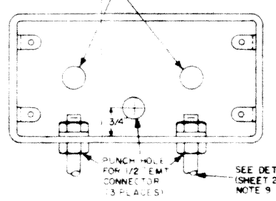


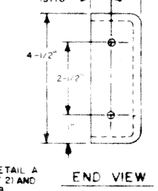


UTILITY BOX MOUNTING BRACKET DETAIL



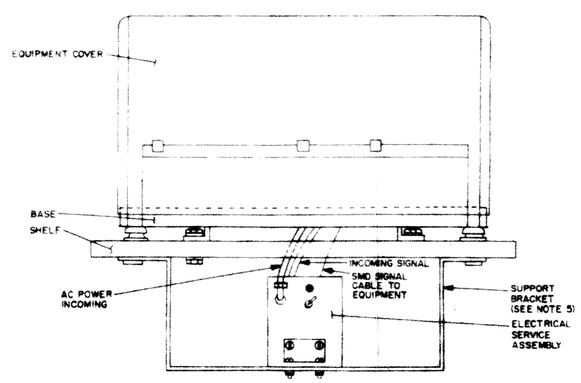
END VIEW



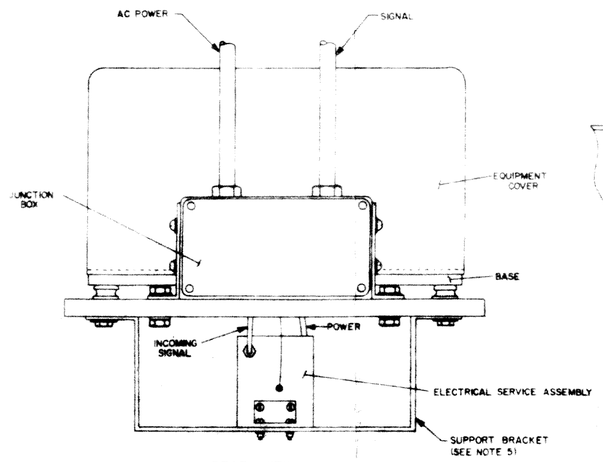


END VIEW

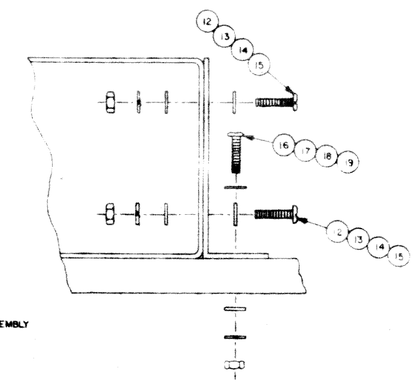
UTILITY BOX DETAIL
FOR UNDER FLOOR Q CELL INSTALLATION
REAR VIEW W/COVER REMOVED



FRONT VIEW



REAR VIEW



TYPICAL BOX MOUNTING DETAIL

LIST OF MATERIAL

CHECK IN COLUMN IF GOVT FURNISHED MAT'L

ITEM NO	QTY	DESCRIPTION	NAVY OR COMM DESIGNATION	GFM
1	AR	CABLE, SIGNAL 1 PR INDIVIDUAL SHIELDED	6145-966-7466	
2	AR	CABLE, POWER 3 CONDUCTOR TYPE SJ		
3	AR	CABLE, POWER 1 CONDUCTOR TYPE TW		
4	AR	CONDUIT, EMT 1/2"		
5	4	CONN COMP TYPE 1/2" W/LOCKNUTS		
6	AR	CONDUIT, FLEXIBLE SEALTITE 1/2"		
7	3	CONN CONDUIT FLEXIBLE 1/2" W/LOCKNUTS		
8	AR	STRAP METAL 1/8" THICK X 2" WIDE		
9	1	BOX, GANG 4-1/2" X 8-5/8" W/O KNOCKOUTS		
10	1	COVER, GANG BOX 4-1/2" X 8-5/8"		
11	3	90° ANGLE CONN FLEXIBLE 1/2"		
12	24	SCREW, MACHINE, PAN HEAD NO. 8-32 X 1/2"		
13	28	WASHER, FLAT NO. 8		
14	24	WASHER, LOCK NO. 8		
15	24	NUT, HEX NO. 8-32		
16	4	SCREW, MACHINE PAN HEAD NO. 10-32 X LG. AR		
17	6	WASHER, FLAT NO. 10		
18	4	WASHER, LOCK NO. 10		
19	4	NUT, HEX NO. 10-32		
20	2	INSERT, AFTERSET 2" FOR Q CELL		
21	2	REDUCER, INSERT 2" TO 1/2 CONDUIT		
22	2	LUG, CRIMP TYPE YAE	BURNDY 18N24	
23	3	LUG, CRIMP TYPE YAE	BURNDY 12N4	
24	AR	FERRULE, HYRING, INNER	BURNDY YIC 109	
25	AR	FERRULE, HYRING, OUTER	BURNDY YDE 110	
26	3	WIRE NUTS		

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVED

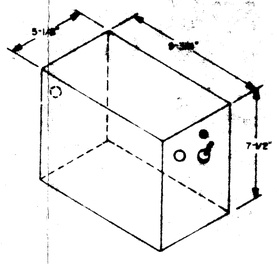
NOTES:

1. CONNECT NO. 14 AWG, 3 CONDUCTOR POWER CABLE WITH WIRE NUTS AT THE JUNCTION BOX. CONNECT TO CABINET GROUND, "S" AND "K" TERMINAL BLOCKS AS INDICATED.
2. ALL SIGNAL CABLE SHIELDS WILL BE GROUNDED AT THE IDF.
3. ALL SPARE PAIRS WILL BE TERMINATED AND GROUNDED AT THE IDF.
4. ALL WIRE TERMINATIONS WILL BE BY CRIMP TYPE LUG OF APPROPRIATE SIZE FOR THE WIRE GAUGE.
5. FABRICATE 2 EACH BRACKETS FROM ITEM NO. 8 TO SUPPORT THE ELECTRICAL SERVICE ASSEMBLY. SECURE THE BRACKETS TO THE UNDERSIDE OF TABLE BY MEANS OF THE EQUIPMENT HOLDOWN BOLTS AND ITEMS 16-17-18 AND 19.
6. FABRICATE BRACKET FROM ITEM NO. 8 TO SUPPORT CONDUIT AND CONNECTOR RUNNING FROM JUNCTION BOX TO THE EQUIPMENT. POSITION BRACKET SO THE CONNECTOR WILL BE AS CLOSE TO THE EQUIPMENT AS POSSIBLE WITHOUT INTERFERING WITH REMOVAL OF COVER.
7. ALL POWER AND SIGNAL CABLES TERMINATING IN THE ELECTRICAL SERVICE ASSEMBLY WILL RUN FROM JUNCTION BOX ON REAR OF EQUIPMENT TO ESA VIA FLEXIBLE CONDUIT.
8. POWER CABLE GAUGE AND CONDUIT SIZE MAY VARY WITH LENGTH OF CABLE RUNS AND SYSTEM POWER REQUIREMENTS.
9. CONDUIT MAY BE INSTALLED EITHER TO OVERHEAD DUCT OR TO UNDERFLOOR Q CELL DEPENDING ON INDIVIDUAL REQUIREMENTS.

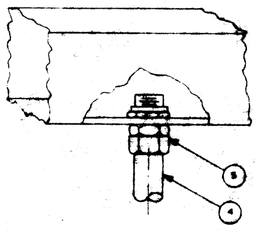
III 46

NO	REFERENCES	DRAWING NO
APPROVAL	NAVAL ELECTRONIC SYSTEMS COMMAND WASHINGTON, D.C. 20390	
PROGRAM MGR	GENERAL SERVICE	FOR SHORE USE
PROJECT ENG	STANDARD PLAN AN/UGR-9 & AN/UGC-25 X LOW LEVEL OPERATION TABLE MOUNTED INSTALLATION AND WIRING DETAILS	
SECTION HEAD		
BRANCH HEAD		
DIVISION HEAD		
DRAFTING SECT		
DRAWN	SIZE: F — CODE IDENT NO: NAVELEXSYSCOM — DRAWING NO: RW 10F 2274 — REV: A	
SATISFACTORY TO	SCALE: NONE — SHEET 1 OF 2	
DATE	DATE	

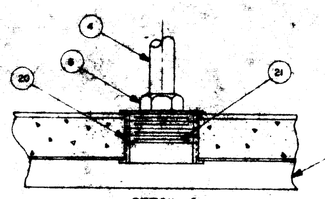
NSN-NAVSEC-4121104 (4-66)



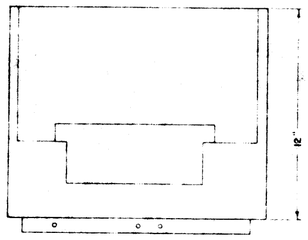
ELECTRICAL SERVICE ASSEMBLY
(321231)



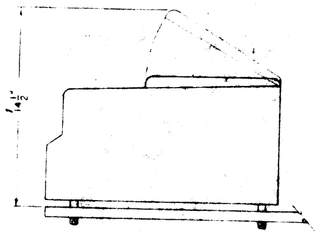
DETAIL B
TYPICAL CONDUIT INSTALLATION
TO POWER/SIGNAL OVERHEAD DUCT



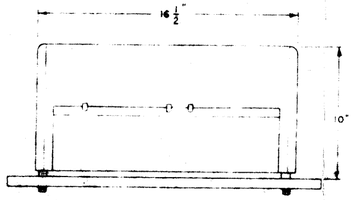
DETAIL A
TYPICAL CONDUIT INSTALLATION
TO UNDER FLOOR O CELL



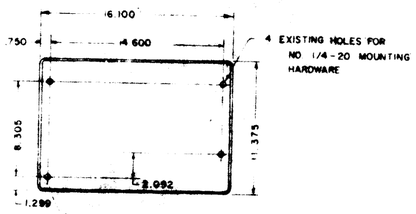
TOP VIEW



SIDE VIEW

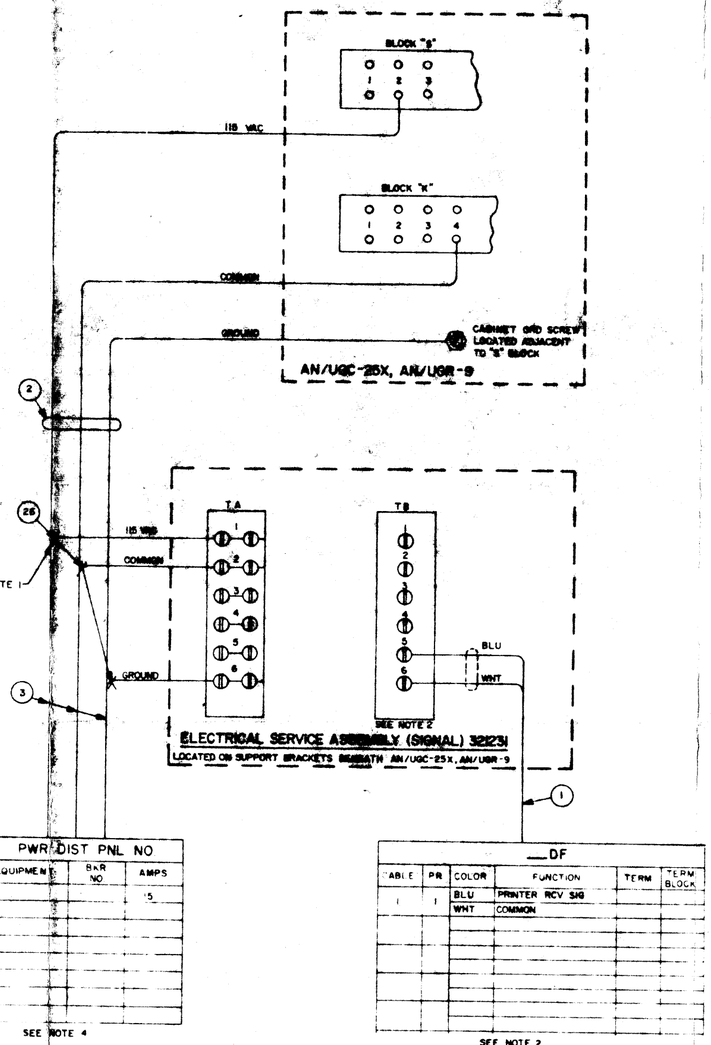


FRONT VIEW



BOTTOM VIEW
BASE PLATE DETAIL
(DEPICTING MOUNTING HOLES)

TYPICAL FOR AN/UGR-9 AND AN/UGC-25X



STANDARD PLAN
AN/UGR-9 & AN/UGC-25X
LOW LEVEL OPERATION
TABLE MOUNTED
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO.	DRAWING NO.	REV
F	RAWELEKSYSCOM	RW 10F 2274	A
SCALE NONE		SHEET 8 OF 8	

NSN 7540-01-480-8300

EQUIPMENT MAJOR COMPONENT NOMENCLATURE

EQUIPMENT	CODE	BAUD RATE	MOTOR	TRANSMITTER DISTRIBUTOR	BASE	COVER		SPECIAL FEATURES
AN/UGR-9	7.42	45.5 50.0 74.2	LMU-37 (SYNCHRO 60 HZ)	LR-111RM/AY	LLB1	LRC4018B		POWER LINE FILTER AND VARIABLE SPEED MECHANISMS
AN/UGC-25X	7.42	45.5 50.0 74.2	LMU-51 (SYNCHRO 50 HZ)	LR-111RN/AY	LLB2	LRC4018R		POWER LINE FILTER AND VARIABLE SPEED MECHANISMS
MOD KIT MK-1090/UG								ELECTRICAL SERVICE ASSY (SIGNAL P/O MK-1090/UG)

TECHNICAL DATA CHART

EQUIPMENT	VOLTAGE	PHASE	FREQUENCY	WATTS	AMPS		HEAT DISSIPATION		WEIGHT UNPACKED	AMB TEMP	HUMIDITY
					RUN	START	WATTS	BTU/HR			
AN/UGR-9	115VAC±10%	SINGLE	60	110	1.90	3.00	58	198	50 LBS	20°C TO 50°C (+/- 22°F)	
AN/UGC-25X	115VAC±10%	SINGLE	50	152	2.40	3.00	79	267	50 LBS		

(CHART INCLUDES POWER REQUIREMENTS, WEIGHTS AND ENVIRONMENTAL FACTORS WITH MK-1090/UG INSTALLED.)

POWER CABLE CHART (SEE NOTE 9)

CABLE RUN FEET	50	100	150	200	250	EQUIPMENT	STOCK NO	MFR NO	TYPE
WIRE SIZE IN AWG	14	14	12	12	10	AN/UGR-9 AN/UGC-25X			TW

LIST OF MATERIAL

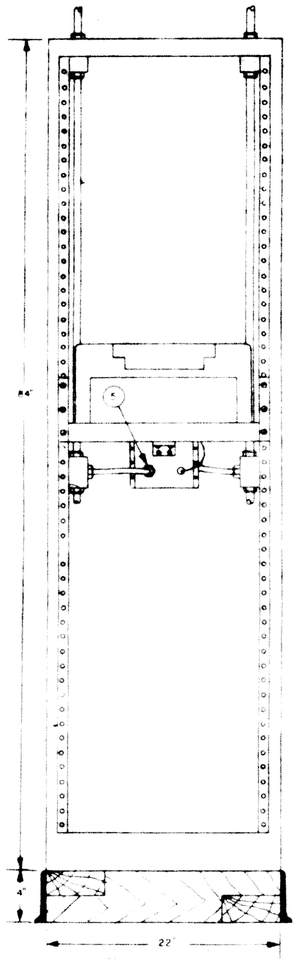
CHECK IN COLUMN IF GOV'T FURNISHED MAT'L.

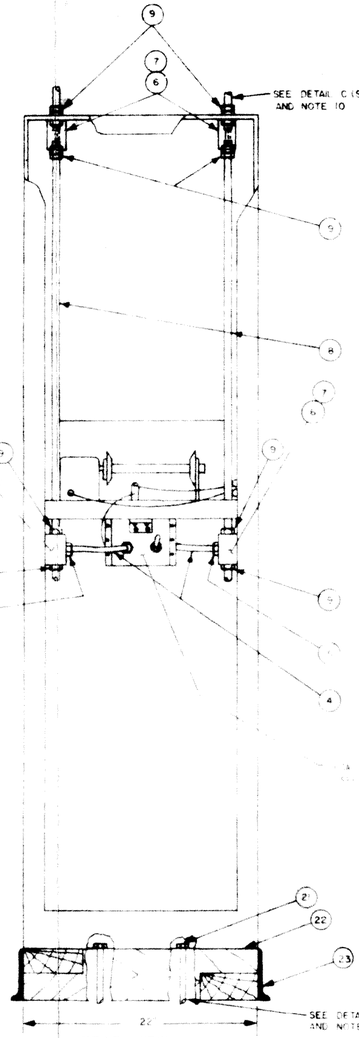
ITEM NO	QTY	DESCRIPTION	NAVY OR COMM DESIGNATION	GFM
1	AR	CABLE, SIGNAL 1 PR INDIVIDUAL SHIELDED	6145-964-7466	
2	AR	CABLE, POWER 3 CONDUCTOR, TYPE SJ		
3	AR	CABLE, POWER 1 CONDUCTOR, TYPE TW		
4	AR	CONDUIT, FLEXIBLE SEALTITE 1/2"		
5	4	CONNECTOR, CONDUIT, FLEXIBLE 1/2" W/LOCKNUTS		
6	4	BOX, UTILITY 4" X 2-1/8" W/O KNOCKOUTS		
7	4	COVER, BOX UTILITY 4" X 2-1/8"		
8	AR	CONDUIT, EMT 3/4"		
9	8	CONNECTOR, COMPRESSION TYPE 3/4" W/LOCKNUTS		
10	3	WIRE NUTS		
11	2	INSERT, AFTER SET 2" FOR Q CELL		
12	2	REDUCER, INSERT 2" TO 3/4" CONDUIT		
13	4	WASHER, FLAT 1/2"		
14	4	SCREW, LAG 1/2" X 1-1/2" LG.		
15	8	WASHER, FLAT NO. 3/8"		
16	4	BOLT, MACHINE, HEX HEAD NO. 3/8"-16 X 3" LG.		
17	12	NUT, HEX NO. 3/8-16		
18	8	WASHER, LOCK NO. 3		
19	AR	THREADED ROD NO. 3/8"-16 X L.G. AR		
20	4	ANCHOR, SELF DRILL NO. 3/8 X 1-1/2" LG		
21	2	BUSHING, 3/4" TYPE SBT		
22	AR	LUMBER, 4" X 4" SFS FIR		
23	AR	MOLDING COVE BASE		
24	1	SLIDING SHELF	PAR METAL BS2419	
25	1	CABINET, ELECTRICAL EQUIP., CY-597A/G		
26	2	LUG, CRIMP TYPE YAE	BURNDY 18N24	
27	3	LUG, CRIMP TYPE YAE	BURNDY 12N4	
28	AR	FERRULE, HYRING INNER	BURNDY YIC 109	
29	AR	FERRULE, HYRING OUTER	BURNDY YOE 110	

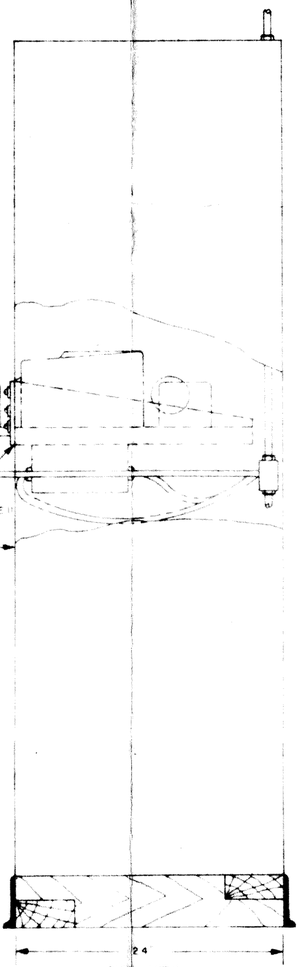
ZONE	SYM	REVISIONS DESCRIPTION	DATE	APPROVED
SH-1 thru SH-2, 3,4 C,D-5, 6,7 SH-2 ADDED	A	MATERIAL LIST, TECHNICAL DATA AND GRAPHIC DETAILS ADDED		

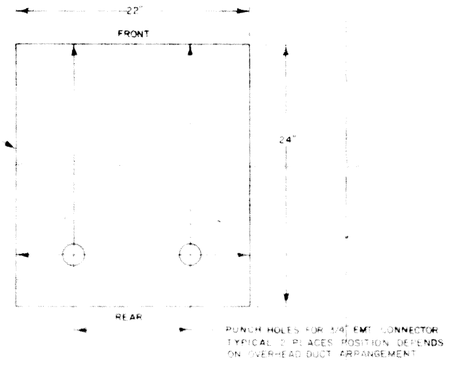
NOTES

1. ALL SIGNAL CABLE SHIELDS WILL BE GROUNDED AT THE IDF.
2. ALL SPARE PAIRS WILL BE TERMINATED AND GROUNDED AT THE IDF.
3. ALL WIRE TERMINATIONS WILL BE BY CRIMP TYPE LUG OF APPROPRIATE SIZE FOR THE WIRE GAUGE.
4. MAKE INTERCONNECTION OF 3 CONDUCTOR TYPE SJ CABLE WITH 1 CONDUCTOR TYPE TW CABLE IN THE POWER JUNCTION BOX LOCATED NEAREST TO EQUIPMENT SHELF USING WIRE NUTS FOR CONNECTORS.
5. SECURE SIGNAL ELECTRICAL SERVICE ASSEMBLY TO UNDERSIDE OF SLIDING SHELF. ALLOW SUFFICIENT SLACK IN CABLE AND FLEXIBLE CONDUIT FOR SLIDING SHELF TO FULLY EXTEND.
6. USE CABINET AC PLUG MOLD FOR PAPER WINDER AND TELETYPE MACHINE MOTOR POWER.
7. PAPER WINDER BASE PLATE SHALL BE USED AS TEMPLATE FOR SHELF MOUNTING AFTER POSITIONING IN LINE WITH EQUIPMENT PAPER FEED OUT.
8. ACTUAL EQUIPMENT DIMENSIONS ARE 12" DEEP X 16" WIDE X 10" HIGH.
9. POWER CABLE GAUGE AND CONDUIT SIZE MAY VARY WITH LENGTH OF CABLE RUNS AND SYSTEM POWER REQUIREMENTS.
10. CONDUIT MAY BE INSTALLED EITHER TO OVERHEAD DUCT OR TO UNDERFLOOR Q CELL DEPENDING ON INDIVIDUAL STATION REQUIREMENTS.
11. AFTER EQUIPMENT AND MOD KITS ARE INSTALLED ON MOUNTING SHELF, FRONT CROSS MEMBER OF MOUNTING SHELF SHALL BE REMOVED.

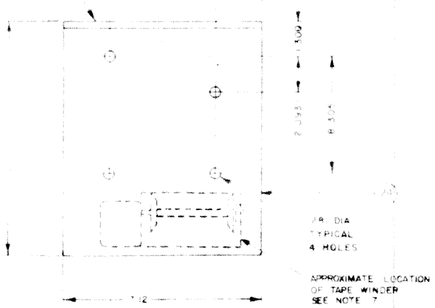








TOP VIEW OF CABINET



TOP VIEW OF MOUNTING SHELF
SEE NOTE 8

NO	REFERENCES	DRAWING NO
3	WIRING DIAGRAM PACKAGE FOR 323809	WDP 0054
2	INSTRUCTIONS FOR INSTALLING LOW LEVEL MOD KIT	NAVSHIPS 09673
1	AN/UGC-25,25X CABINET MOUNT INSTL & WIRING DETAILS	RW 10F 2196

APPROVAL

PROJECT ENG	
SECTION HEAD	
BRANCH HEAD	
DIVISION HEAD	
DRAFTING SECT	
DRAWN	
	DATE
SATISFACTORY TO	
	DATE

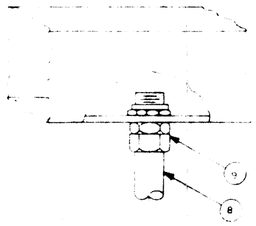
NAVAL ELECTRONIC SYSTEMS COMMAND
WASHINGTON D.C. 20390
GENERAL SERVICE FOR SHORE USE

STANDARD PLAN
AN/UGR-9 & AN/UGC-25 X
LOW LEVEL OPERATION
CABINET MOUNTED
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO NAVELEXSYSCOM	DRAWING NO	REV
F		RW 10F 2275	A

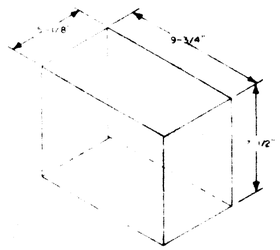
SCALE NONE SHEET 1 OF 2

NDW-NAVSEC 4121/104 (4-66)

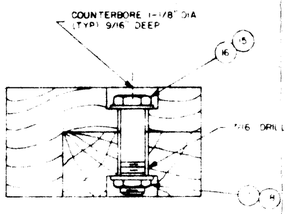


DETAIL - C

TYPICAL GROUND INSTALLATION
POWER POLE OR HEADER

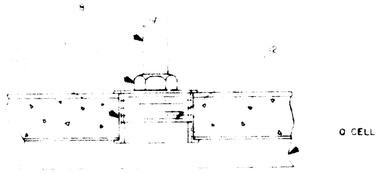


ELECTRICAL SERVICE ASSEMBLY
(321231)



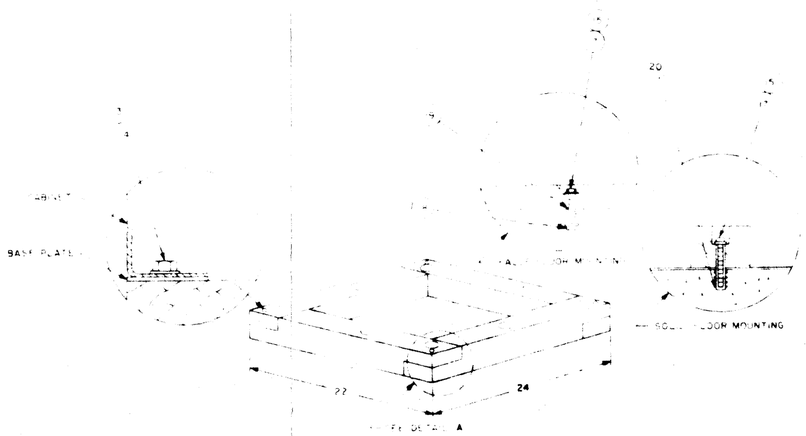
DETAIL - A

TYPICAL FOUNDATION ASSEMBLY

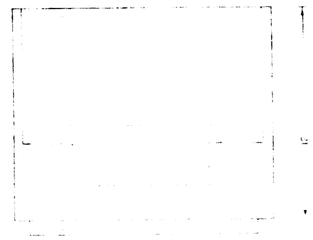


DETAIL - B

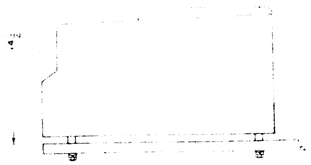
TYPICAL CONDUIT INSTALLATION
FOR NEMA 4 OR Q CELL



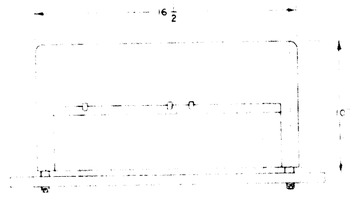
TYPICAL FOUNDATION FABRICATION



TOP VIEW

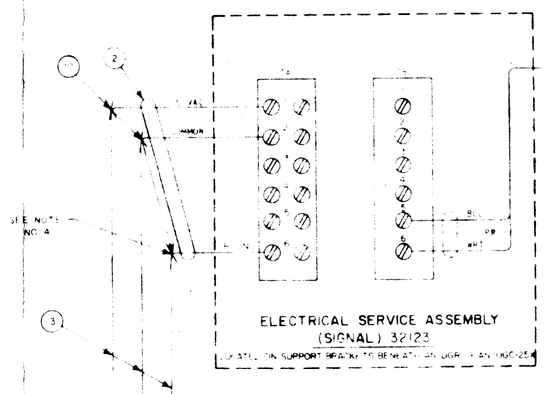


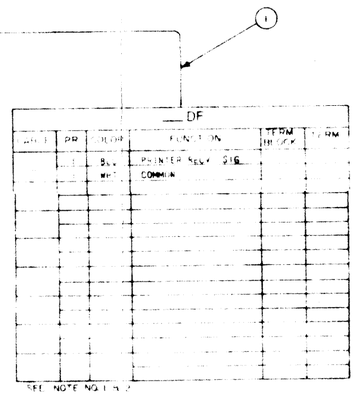
SIDE VIEW



FRONT VIEW

TYPICAL FOR AN/UGR-9 AND AN/UGC-25X





PWR DIST PNL NO		
EQUIPMENT	BKR NO.	AMPS

SEE NOTE NO. 3

STANDARD PLAN
AN/UGR-9 & AN/UGC-25X
LOW LEVEL OPERATION
CABINET MOUNTED
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO.	NAVELEXSYSCOM DRAWING NO	REV.
F		RW 10F 2275	A

SCALE NONE SHEET 2 OF 2

NSN-7540-00-C-4121104 (4-69)

III
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EQUIPMENT MAJOR COMPONENT NOMENCLATURE

EQUIPMENT	CODE	BAUD RATE	MOTOR	TYPING REPERFORATOR	BASE	COVER		SPECIAL FEATURES
TT-192/UG	7.42	45.5 56.9 75.0	PD-17A/U (SYNCHRO 60 HZ)	LPR9AWA	L[illegible]8	LRC202BR		VARIABLE SPEED MECHANISM
TT-192A/UG	[illegible]	45.5 50.0 75.0	PD-92/U (SYNCHRO 60 HZ)	LPR40AWA	LRB3[illegible]	LRC205BR		MINIATURIZED, VARIABLE SPEED MECHANISM AND SLIDING BASE
TT-274/UG	7.42	45.5 56.9 75.0	PD-18A/U (SERIES GOVERNED)	LPR9AWA	LRB8	LRC202BR		VARIABLE SPEED MECHANISM AND SPEED INDICATOR
TT-274A/UG	7.42	45.5 50.0 75.0	PD-108/U (SYNCHRO 50 HZ)	LPR9AWA	LRB49	LRC202BR		VARIABLE SPEED MECHANISM
MOD KIT MK-1086/UG								ELECTRICAL SERVICE ASSEMBLY (SIGNAL P/O MK-1086/UG)

POWER CABLE CHART (SEE NOTE 7)

CABLE RUN FEET	50	100	150	200	250	EQUIPMENT	STOCK NO	MFR NO.	TYPE
WIRE SIZE IN AWG	14	14	14	12	12	TT-192/UG TT-192A/UG TT-274/UG TT-274A/UG WITH MK-1086/UG MOD			TW

LIST OF MATERIAL

CHECK IN COLUMN IF GOV'T FURNISHED MAT'L

ITEM NO	QTY	DESCRIPTION	NAVY OR COMM DESIGNATION	GFM
1	AR	CABLE, SIGNAL 1 PR INDIV SHIELDED	MIL-C-23437C	
2	AR	CABLE, POWER 3 COND TYPE SJ		
3	AR	CABLE, POWER 1 COND TYPE TW		
4	AR	CONDUIT, FLEXIBLE SEALTITE 1/2"		
5	4	CONN COND FLEXIBLE 1/2" W/LOCKNUTS		
6	4	BOX, UTILITY 4" X 2-1/8" W/OUT KNOCKOUTS		
7	4	COVER, BOX UTILITY 4 X 2-1/8"		
8	AR	CONDUIT, EMT 3/4"		
9	8	CONN COMPR TYPE 3/4" W/LOCKNUTS		
10	3	WIRE NUTS		
11	2	INSERT, AFTERSET 2" FOR Q CELL		
12	2	REDUCER, INSERT 2" TO 3/4" CONDUIT		
13	4	WASHER, FLAT NO. 1/2		
14	4	SCREW LAG 1/2" X 1-1/2" LG		
15	8	WASHER FLAT NO. 8		
16	4	BOLT, MACHINE, HEXHEAD NO. 3/8-16 X 3" LG		
17	12	NUT, HEX NO. 3/8-16		
18	8	WASHER, LOCK NO. 8		
19	AR	THREADED ROD NO. 3/8-16 LG AR		
20	4	ANCHOR, SELF DRILL NO. 3/8" X 1-1/2" LG		
21	2	BUSHING, 3/4" TYPE SBT		
22	AR	LUMBER 4" X 4" SFS FIR		
23	AR	MOLDING COVE BASE		
24	2	LUG, CRIMP TYPE YAE	BURNDY 18N24	
25	3	LUG, CRIMP TYPE YAE	BURNDY 12N4	
26	AR	FERRULE, UNIRING	BURNDY YEC 130	
27	1	SHELF SLIDING PAR METAL	39-2419	

REVISIONS

ZONE	SYM	DESCRIPTION	DATE	APPROVED
H1, C1	A	SHEET 1 CHANGED CHARTS & MATERIAL LIST	2/5/69	
A & B		ADDED GRAPHIC DIMENSIONS AND CONDUIT DETAILS	2/5/69	
E7, F7		CHANGED NOTE 6 ADDED NOTES 7, 8 & 9 ADDED SHEET 2	2/5/69	
	B	REVISED AND UPDATED	3/18/69	[signature]

TECHNICAL DATA CHART

EQUIPMENT	VOLTAGE	PHASE	FREQUENCY (HZ)	WATTS	AMPS RUN	AMPS START	HEAT DISSIPATION WATTS	HEAT DISSIPATION BTU/HRS	WEIGHT UNCRATED	AMB TEMP	HUMIDITY
TT-192/UG	115 VAC	SINGLE	60	110	1.85	9.00	58	198	40.00 LBS	-20° C (-4° F) TO +50° C (+122° F)	
TT-192A/UG	115 VAC	SINGLE	60	110	1.25	5.00	58	198	33.75 LBS		
TT-274/UG	115 VAC	SINGLE	50-60	140	1.00	1.75	83	284	41.00 LBS		
TT-274A/UG	115 VAC	SINGLE	50	152	2.40	9.00	78	267	41.00 LBS		

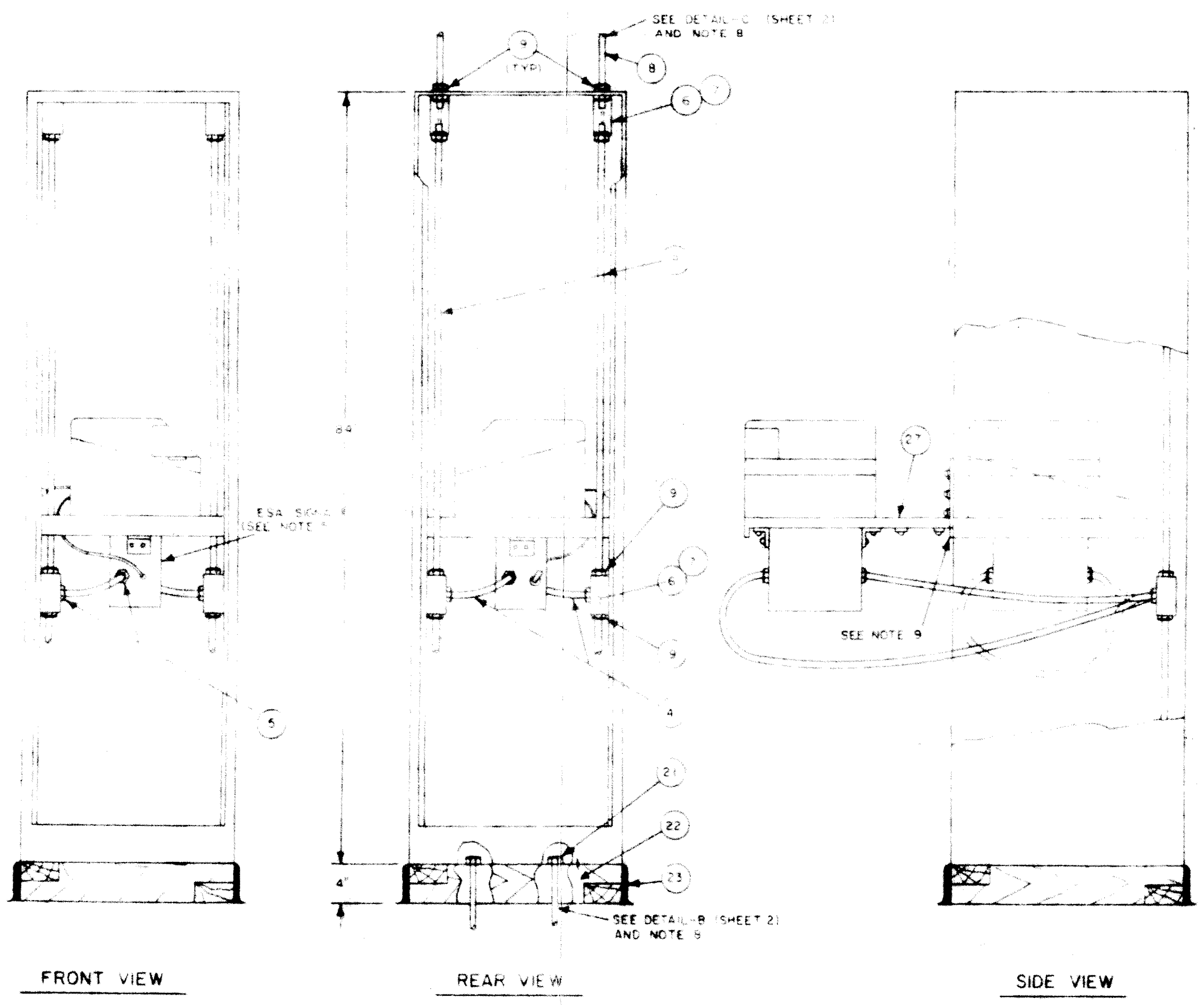
CHART INCLUDES POWER REQUIREMENTS, WEIGHTS AND ENVIRONMENTAL FACTORS WITH MK-1086/UG INSTALLED

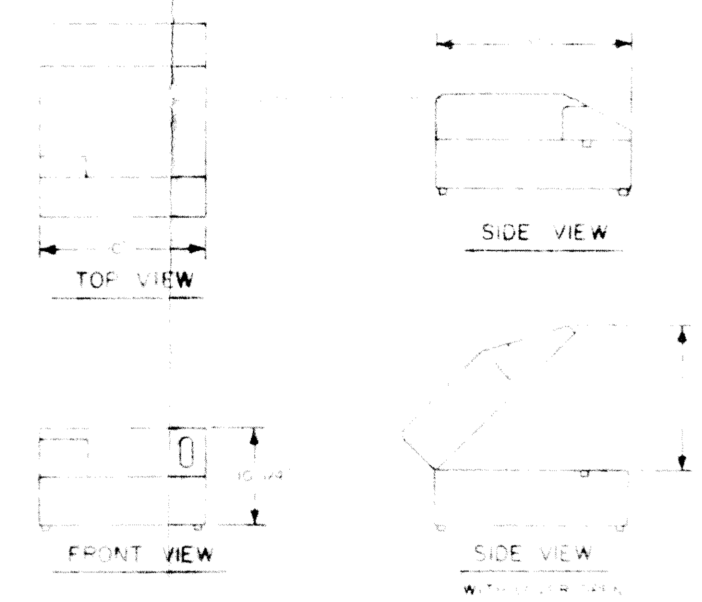
NOTES

1. ALL SIGNAL CABLE SHIELDS WILL BE GROUNDED AT THE IDF.
2. ALL SPARE PAIRS WILL BE TERMINATED AND GROUNDED AT THE IDF.
3. ALL WIRE TERMINATIONS WILL BE BY CRIMP TYPE LUG OF APPROPRIATE SIZE FOR THE WIRE GAUGE.
4. MAKE INTERCONNECTION OF 3 CONDUCTOR TYPE SJ CABLE WITH 1 CONDUCTOR TYPE TW CABLE IN THE POWER JUNCTION BOX LOCATED NEAREST TO EQUIPMENT SHELF USING WIRE NUTS FOR CONNECTORS.
5. SECURE SIGNAL ELECTRICAL SERVICE ASSEMBLY TO UNDERSIDE OF SLIDING SHELF. ALLOW SUFFICIENT SLACK IN CABLE AND FLEXIBLE CONDUIT.
6. USE CABINET AC PLUG MOLD FOR TELETYPE MOTOR POWER.
7. POWER CABLE GAUGE AND CONDUIT SIZE MAY VARY WITH LENGTH OF CABLE RUNS AND SYSTEM POWER REQUIREMENTS.
8. CONDUIT MAY BE INSTALLED EITHER TO OVERHEAD DUCT OR TO UNDERFLOOR Q CELL DEPENDING ON INDIVIDUAL STATION REQUIREMENTS.
9. AFTER EQUIPMENT AND MOD KIT ARE INSTALLED ON MOUNTING SHELF, FRONT CROSS MEMBER OF MOUNTING SHELF SHALL BE REMOVED.

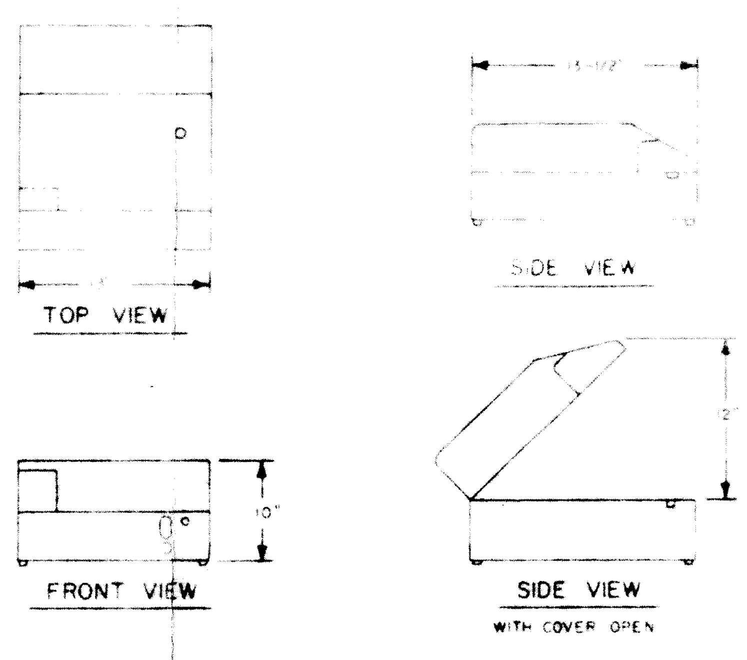
REFERENCES

1. INSTRUCTIONS FOR INSTALLING LOW LEVEL MOD KIT NAVSHIPS 0967-273-2010
2. WIRING DIAGRAM PACKAGE FOR 323805 MOD KIT WDP0053.
3. TELETYPE BULLETINS [illegible]
4. TELETYPE CORP WIRING DIAGRAM PACKAGE WDP0053

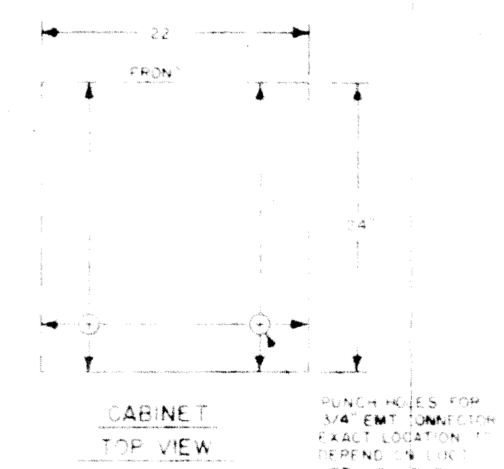


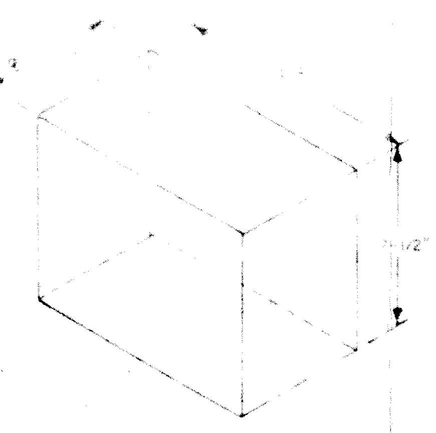


TYPICAL FOR TT-192A/UG



TYPICAL FOR TT-192/UG, TT-274/UG AND TT-274A/UG



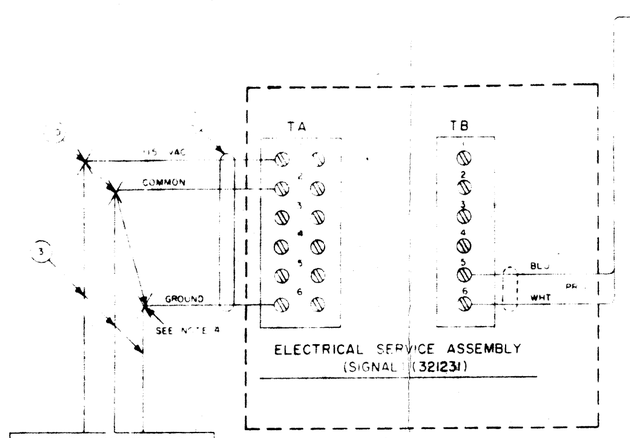


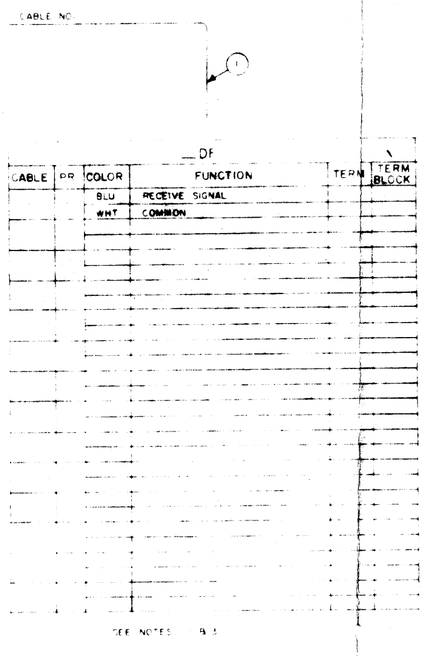
ELECTRICAL SERVICE ASSEMBLY (321231)

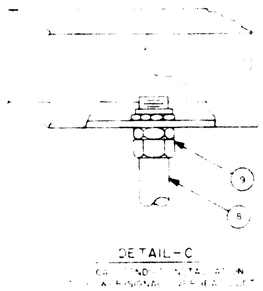
FOR CRIT COMM USE

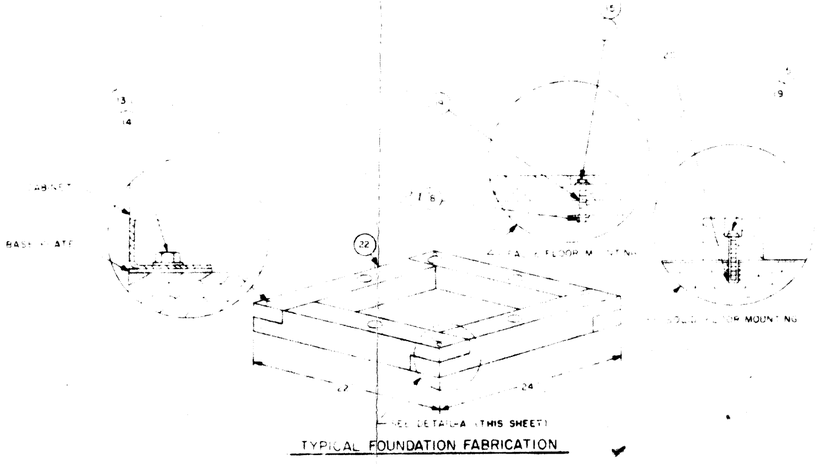
APPROVAL [signature]	NAVAL ELECTRONIC SYSTEMS COMMAND WASHINGTON D.C. 20390
PROJECT ENG [signature]	GENERAL SERVICE — FOR SHORE USE
SECTION HEAD	STANDARD PLAN
BRANCH HEAD	TT-192/UG, 192A AND TT-274/UG, 274A (CABINET MOUNTED) LOW LEVEL OPERATION
DIVISION HEAD [signature]	INSTALLATION AND WIRING DETAILS
DRAFTING SECT — DRAWN	SIZE F — CODE IDENT NO NAVELEXSYSCOM — DRAWING NO RW 10F 2277 — REV 1B
	SCALE NONE — SHEET 1 OF 2

ENCL (24) TO NAVELECSYSCOMSEDIV LTR SER 624-2180F / OCT 70

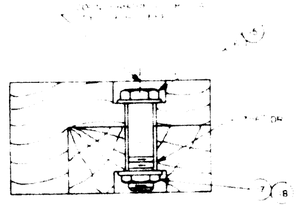








TYPICAL FOUNDATION FABRICATION



STANDARD PLAN
TT-192/UG, 192A AND TT-274/UG, 274A
(CABINET MOUNTED) LOW LEVEL OPERATION
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO	REV
F		RW 10F 2277	B5

SCALE NONE SHEET 2 OF 2

NSN - NAVSEC - 4121-1104 (4-80)

III 53

EQUIPMENT MAJOR COMPONENT NOMENCLATURE

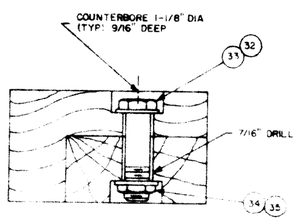
EQUIPMENT	CODE	BAUD RATE	MOTOR	TYPING UNIT	KEYBOARD	ESU	CABINET	SPECIAL FEATURES
AN/UGC-20	7.42	45.5 50.0 74.2	LMU 37 (SYNCHRO 60 HZ)	LP111 RM/AY	LLK2ARN	NONE	LPC-400BR	POWER LINE FILTER AND VARIABLE SPEED MECHANISM
ESA 323120	NA	NA	NA	NA	NA	NA	NA	
ESA 323121	NA	NA	NA	NA	NA	NA		

TECHNICAL DATA CHART

EQUIPMENT	VOLTAGE	PHASE	FREQUENCY	WATTS	AMPS		HEAT DISSIPATION		WEIGHT UNCRATED	AMB TEMP	HUMIDITY
					RUN	START	WATTS	BTU/HRS			
AN/UGC-20	115 VAC	SINGLE	60 HZ	75	1.9	9.0	58	198	59 LBS.	-20°C (-4°F) TO +50°C (+122°F)	
ESA 323120	115± 10%	1	50-60 HZ	35	.3		35	100	15 LBS.	NA	NA
ESA 323121	115± 10%	1	50-60 HZ	35	.3		35	100	15 LBS.	NA	NA

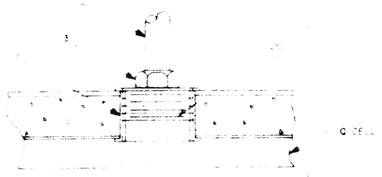
POWER CABLE CHART (SEE NOTE 1)

CABLE RUN FEET	50	100	150	200	250	EQUIPMENT	STOCK NO	MFR NO	TYPE
WIRE SIZE IN AWG	14	14	12	12	10	AN/UGC-20			TW

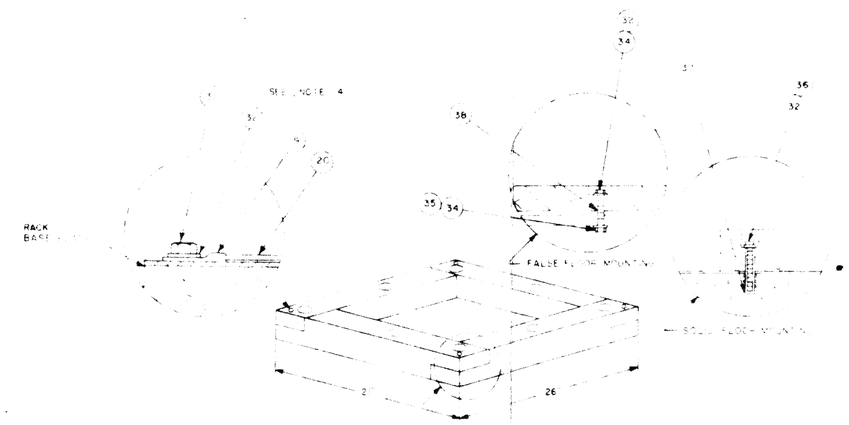


DETAIL A
TYPICAL FOUNDATION ASSEMBLY

DETAIL B
INSTALLATION OF CONDUIT



DETAIL C
TYPICAL CONDUIT INSTALLATION TO UNDER FLOOR Q CELL



TYPICAL FOUNDATION FABRICATION

LIST OF MATERIAL

CHECK IN COLUMN IF GOVT FURNISHED MAT'L

ITEM NO	QTY	DESCRIPTION	NAVY OR COMM DESIGNATION	GFM
1	1	RELAY RACK	RR 197	
2	AR	CONDUIT, EMT 3/4"		
3	4	CONNECTOR, COMPRESSION 3/4" W/LOCKNUTS INS.	T & B 5233	
4	10	CONNECTOR, LIQ. TIGHT, FLEX CONDUIT 1/2" INS	T & B 5332	
5	1	ENLARGER, MALE, 1/2" TO 3/4"	T&B 1265	
6	3	CONDUIT OUTLET, TYPE T 1/2" APPLETON T50M W/COVER K50-CM		
7	AR	CONDUIT, LIQ. TIGHT FLEX 1/2"	"SEALTITE"	
8	AR	CABLE, POWER, 3 COND. 18 AWG. TYPE SJ		
9	AR	CABLE, SIGNAL, IND. SHIELDED PRS. 2 PR	FSN6145-914-5253	
10	AR	CABLE, SIGNAL, IND. SHIELDED PRS. 1 PR	FSN6145-964-7466	
11	2	CONNECTOR, STRAIN RELIEF, .125 MIN-.250 MAX	T & B 2520	
12	1	STEEL SHEET, COLD ROLLED, 16GA. 27 1/2" X 23"		
13	1 PR	SLIDES, "CHASIS-TRAK" MODEL CTS 124 WITH GUSSET MOUNT ASSEMBLY FOR FRONT RAIL ONLY MOUNTING INCLUDING ALL NECESSARY HDWRE FOR MOUNTING CHASIS-TRAY CO., INDIANAPOLIS, IND., SEE NOTE 6.		
14	1	BOX, REG. STEEL, W/COVER, WELDED SEAMS, NO HOLES, HOFFMAN ENCLOSURE MODEL A04S 4" X 4" X 3" (OR EQUIV)		
15	-	BOLT MACH. H.H. NO 1/4"-20 X 1.2 TO SUIT		
16	4	WASHER FLAT 1/4		
17	4	WASHER LOCK 1/4"		
18	9	WIRENUTS "IDEAL" MODEL 768 (OR EQUIV)		
19	1	LUG, SELF INSULATED FOR 3/8" STUD	SEE NOTE 4	
20	AR	INSULATED SINGLE SOLID CONDUCTOR	SEE NOTE 4	
21	AR	CABLE POWER, 1 COND. TYPE TW (BLK WHT GRN)		
22	AR	STRAPS STEEL PIPE, 3/4"		
23	AR	FERRULE, HYRING, INNER	BURNDY YIC 109	
24	AR	FERRULE, HYRING, OUTER	BURNDY YOE 110	
25	AR	LUG CRIMP TYPE YAE	BURNDY YAE 18-N24	
26	AR	LUG CRIMP TYPE YAE	BURNDY YAE 12-N4	
27	AR	LUMBER, 4 X 4 FIR SFS		
28	AR	MOLDING, COVE BASE		
29	2	REDUCER, INSERT 2" TO 3/4"		
30	2	INSERT AETERSET 2" FOR Q CELL		
31	4	SCREW, LAG 3/8" X 2 1/2" LG		
32	8	WASHER FLAT NO. 3/8		
33	4	BOLT, MACHINE, H.H. 3/8-16 X 3" LG		
34	12	NUT, H.H. 3/8-16		
35	8	WASHER, LOCK NO 3/8		
36	4	BOLT, MACHINE H.H. NO 3/8-16, LG TO SUIT		
37	4	ANCHOR, SELF DRILL, NO 3/8 X 1 1/2" LG		
38	AR	THREADED ROD 3/8-16, LG AS REQUIRED		
39	1	NIPPLE, CHASE 1" T & B NO 843 W/LOCKNUT NO 142		
NO 4	AR	CONDUIT 1/2" EMT BUSHING, TYPE SBT 3/4"		

ZONE	SYM	REVISIONS DESCRIPTION	DATE	APPROVED
	A	CORRECTED WIRING	4/17/68	

NOTES:

1. POWER CABLE GAUGE AND CONDUIT SIZE WILL VARY WITH LENGTH OF CABLE RUN AND SYSTEM POWER REQUIREMENTS.
2. SIGNAL CABLE SHIELDS ARE TO BE FLOATED AT THE EQUIPMENT AND GROUNDED AT THE 1DF ONLY FOLD BACK SPARE PAIRS AT EQUIPMENT TERMINAL BLOCK LEAVING SUFFICIENT LENGTH TO REACH ANY TERMINAL. TERMINATE AND GROUND SPARE PAIRS AT 1DF.
3. ALL WIRE TERMINATIONS ON SCREW TYPE TERMINALS SHALL BE EFFECTED BY THE APPROPRIATE SIZE CRIMP TYPE LUG.
4. GROUND EQUIPMENT RACK TO STATION GROUND BUS USING ITEMS 19 AND 20. SIZE OF SOLID CONDUCTOR TO BE DETERMINED LOCALLY BASED ON TOTAL ELECTRICAL REQUIREMENTS FOR RACK.
5. THIS DWG COVERS THOSE EQUIPMENTS MODIFIED FOR LOW LEVEL OPERATION IN ACCORDANCE WITH REFERENCES 3 AND 4.
6. MEASUREMENTS INVOLVING SLIDING SHELVES ARE BASED ON REFERENCES 5 AND 6. FURTHER, THESE REFERENCES INDICATE THAT GUSSET MOUNTS MUST BE SPECIFIED IN ORIGINAL PURCHASE ORDER.
7. WHEN IT IS DESIRED TO PROVIDED AN EXTERNAL 26V REMOVE THE LEADS TO POWER SUPPLY CIRCUIT CARD FROM TB2 AND TB3. CONNECT BATTERY COMMON OF EXTERNAL SUPPLY TO TB6 PAIR 3. CABLE NO.1 AND PAIR 1, CABLE NO. 2 NORMALLY TO BE LEFT FLOATING AT EQUIPMENT AND GROUNDED AT 1DF AND CONNECTED ONLY WHEN EXTERNAL 26V SUPPLY IS USED.
8. SIGNAL CABLE CALLED OUT IN LIST OF MATERIALS ARE TO BE IN ACCORDANCE WITH MIL-C-23437A, LATEST REVISION.
9. CONDUIT MAY BE ROUTED TO OVER HEAD DUCT OR UNDER FLOOR Q CELL DEPENDING ON INDIVIDUAL REQUIREMENTS.

NO	REFERENCES	DRAWING NO
5	CHASIS-TRAK CO. REV. E 12-29-56	B-156
5	CHASIS-TRAK CO. REV. E 12-16-62	D-152-A
4	TELETYPE CORP	WDP0123
3	NAVSHIPS (INST INSTALLING MK-1158/UGC MOD KIT)	0967-345-3010
2	TELETYPE BULLETIN	2640
1	TECH MANUAL NAVSHIPS	93241

APPROVAL	
PROGRAM MGR	
PROJECT ENG	
SECTION HEAD	
BRANCH HEAD	
DIVISION HEAD	
DRAFTING SECT	
DRAWN	
	DATE
SUPERVISOR IC	DATE

NAVAL ELECTRONIC SYSTEMS COMMAND
WASHINGTON D.C. 20390

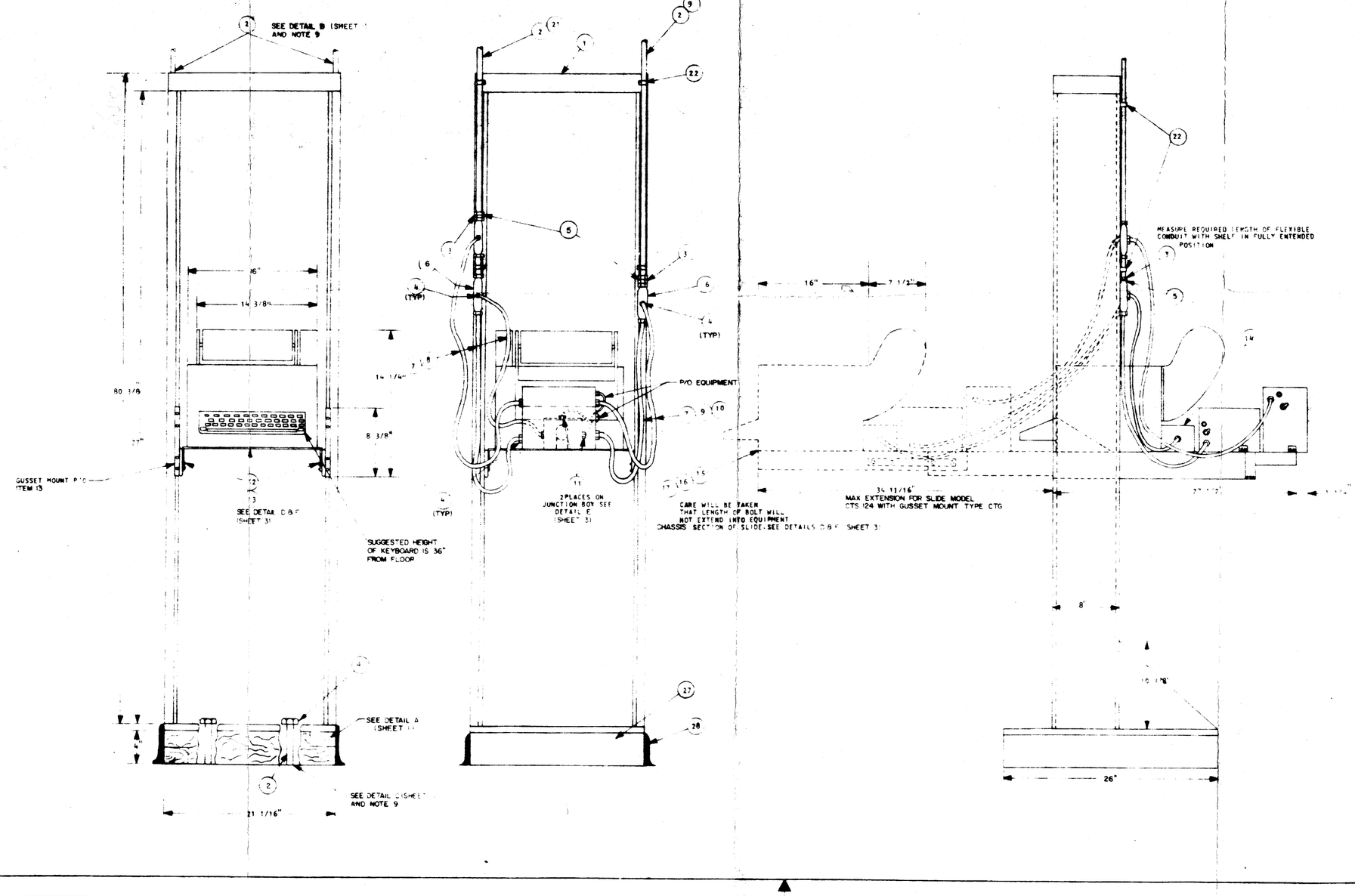
GENERAL SERVICE — FOR SHORE USE

STANDARD PLAN
AN/UGC-20 LOW LEVEL
RACK MOUNTED
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO	REV
F	28687	0100300	A

SCALE NONE — SHEET 1 OF 4

NAVMAT-NAVSEC-4121/184 (6-66)



STANDARD PLAN

AN/UGC-20 LOW LEVEL

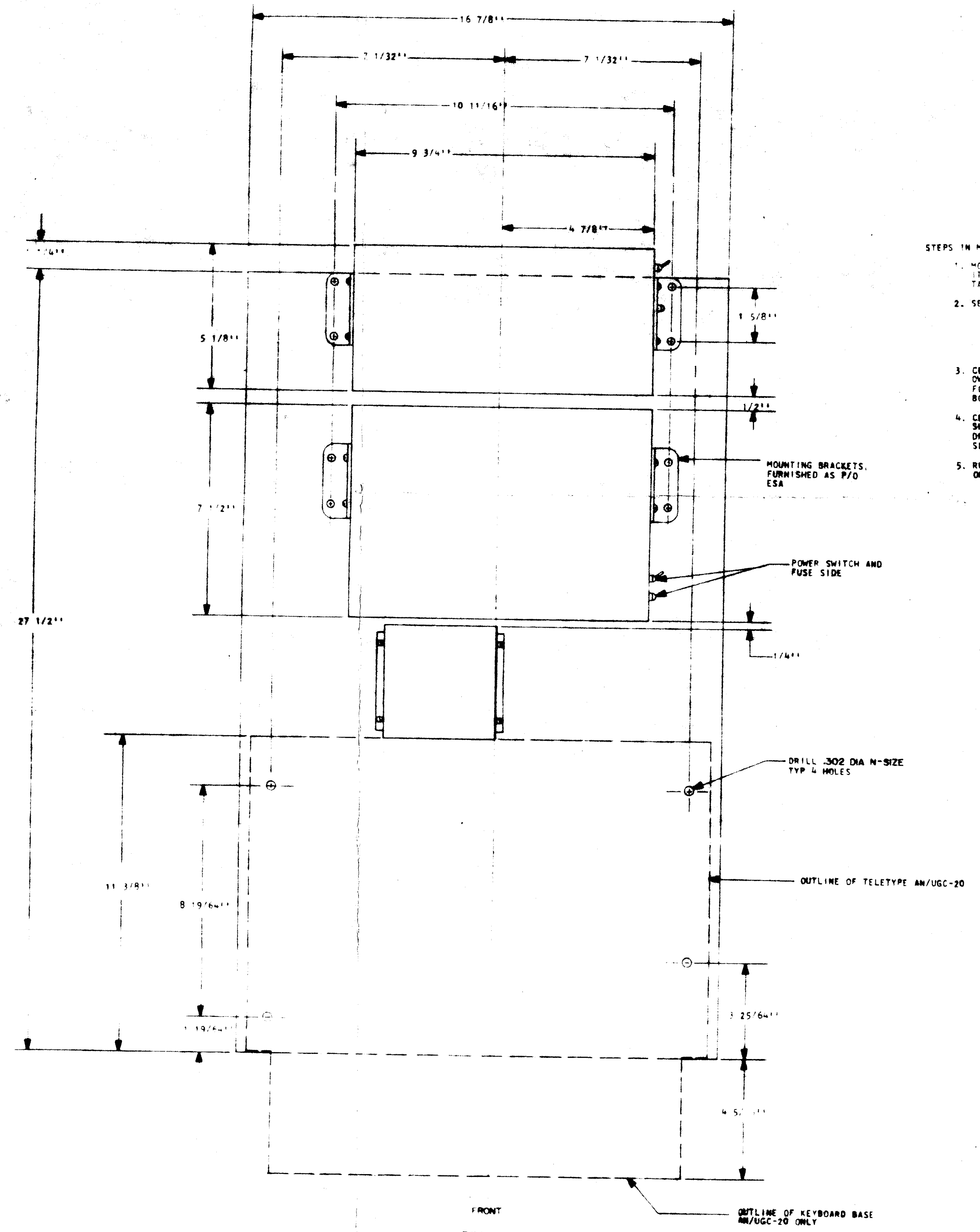
RACK MOUNTED

INSTALLATION AND WIRING DETAILS

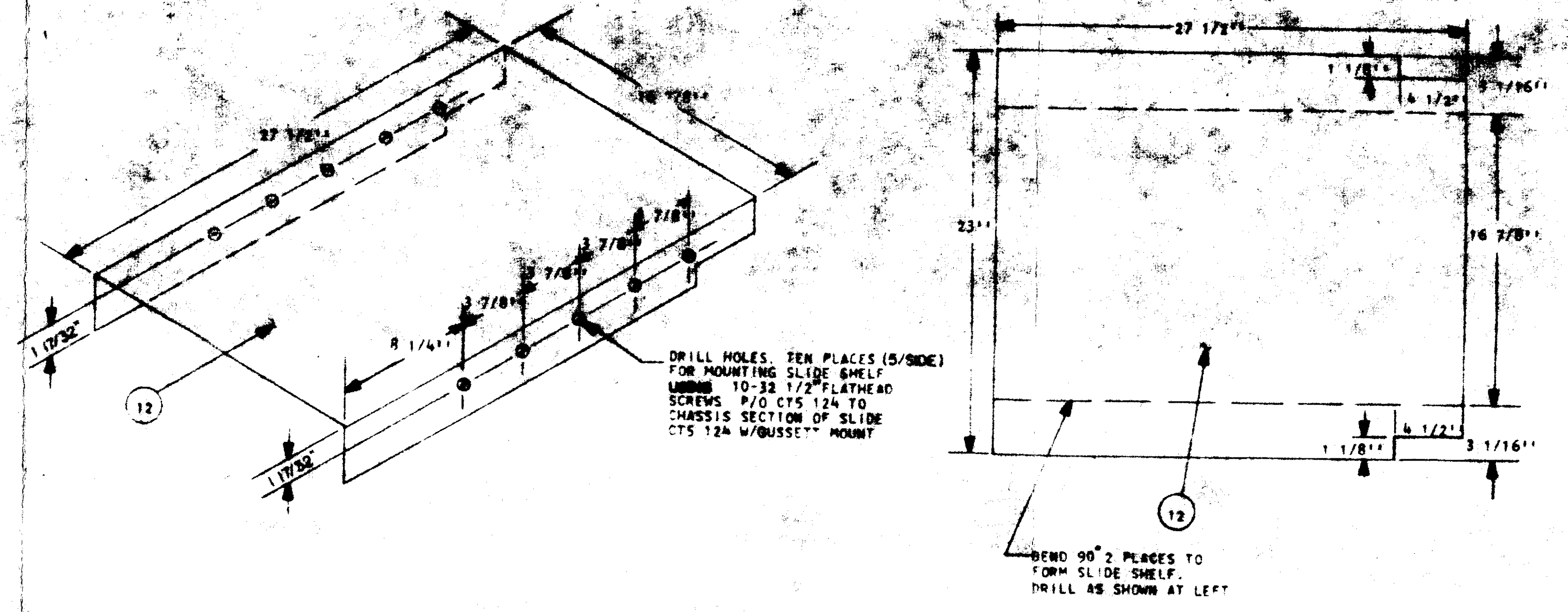
SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO	REV
F	28687	0100300	A

SCALE NONE SHEET 2 OF 4

NAVSEC-4121/104 (4-66)



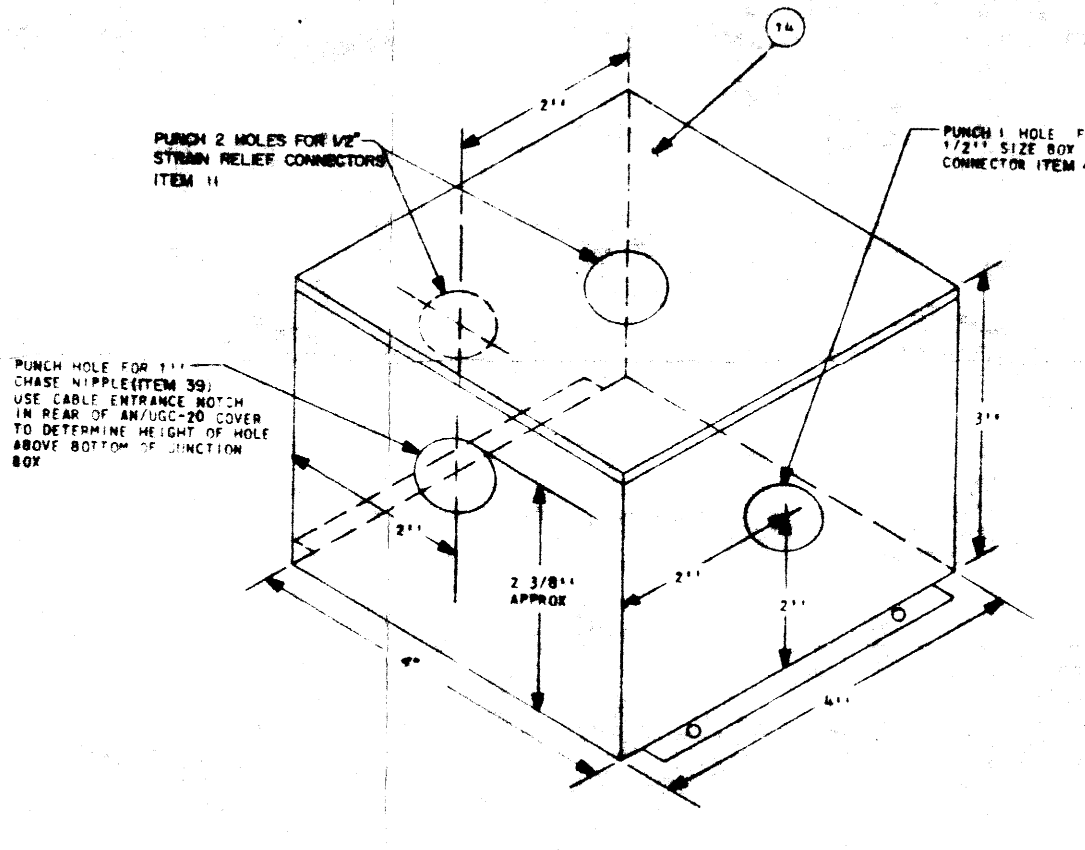
DETAIL D
SLIDE SHELF EQUIPMENT MOUNTING DETAIL FOR AN/UGC-20



DETAIL F
SLIDE SHELF FABRICATION DETAILS

STEPS IN MOUNTING AN/UGC-20 EQUIPMENT TO SLIDE SHELF:

1. MOUNT TELETYPWRITER SECURELY TO SLIDING SHELF USING ITEMS 15,16 AND 17 THRU HOLES SHOWN IN DETAIL D CARE WILL BE TAKEN THAT LENGTH OF BOLT WILL NOT EXTEND INTO EQUIPMENT
2. SEE DETAIL E
   POSITION JUNCTION BOX SO THAT 1" CHASE NIPPLE IS IN LINE WITH CABLE ENTRANCE IN REAR OF TELETYPEWRITER COVER AND TOUCHING COVER BUT NOT BINDING ON IT. USING HOLES IN JUNCTION BOX TO SLIDE SHELF USING HARDWARE FURNISHED.
3. CENTER ESA 323120 ON ITS SIDE ON SLIDE SHELF AS SHOWN IN DWG ON LEFT. USING FURNISHED BRACKETS AND PRE DRILLED HOLES FOR SIDE MOUNTING EAS AS TEMPLATE. DRILL SLIDE SHELF AND BOLT ESA 323120 TO SLIDE SHELF.
4. CENTER ESA 323121 IN ITS UPRIGHT POSITION ON SLIDE SHELF AS SHOWN IN DWG ON LEFT. USING FURNISHED BRACKETS AND PRE DRILLED HOLES FOR UPRIGHT MOUNTING ESA AS TEMPLATE. DRILL SLIDE SHELF AND BOLT ESA 323121 TO SLIDE SHELF.
5. RUN CABLE IN CONDUITS AS SHOWN IN FRONT, REAR AND SIDE VIEWS ON PRECEDING SHEET AND WIRING AND CABLING DIAGRAMS THIS DWG.

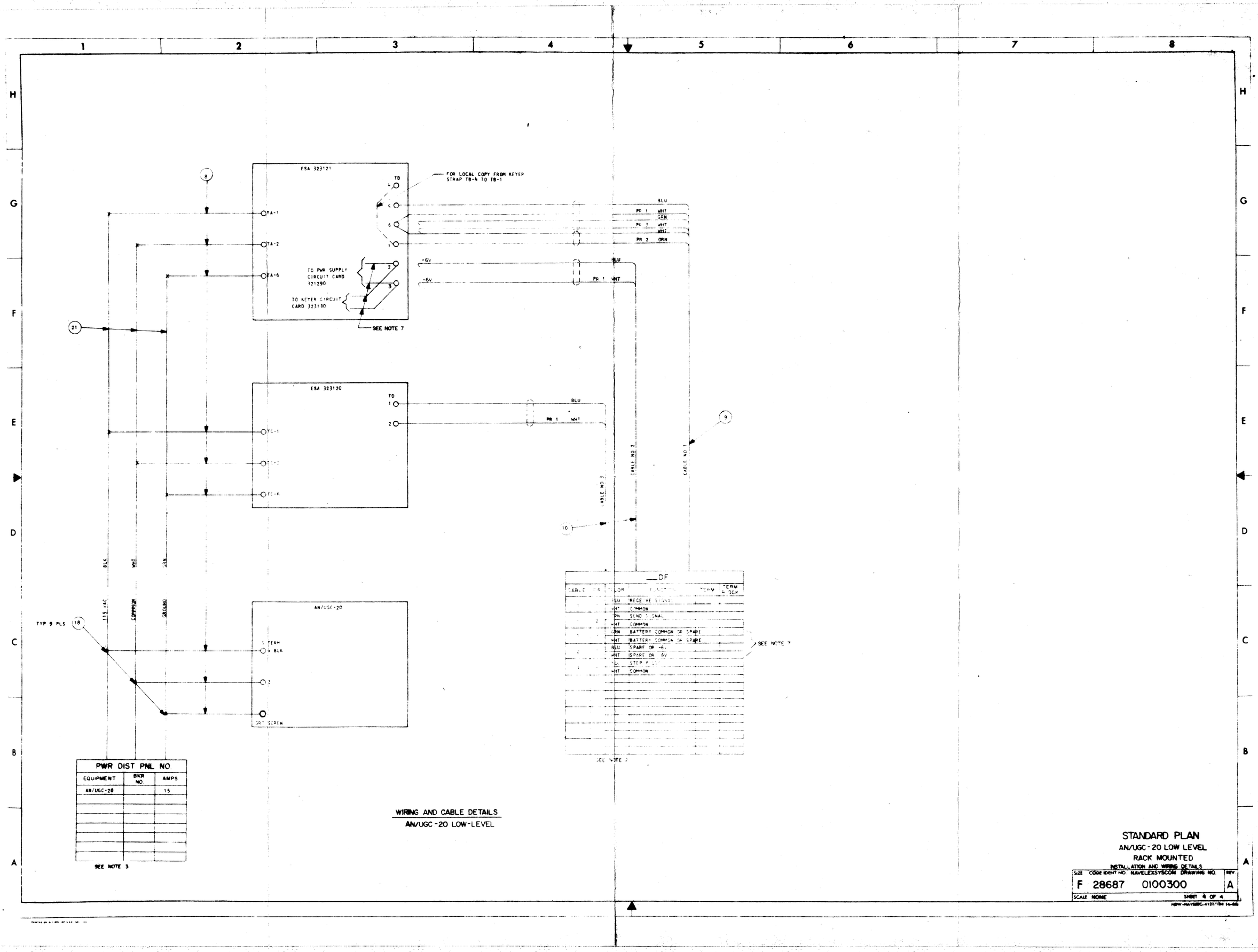


DETAIL E
JUNCTION BOX

STANDARD PLAN
AN/UGC-20 LOW LEVEL
RACK MOUNTED
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO	REV
F	28687	0100300	A

SCALE NONE — SHEET 3 OF 4



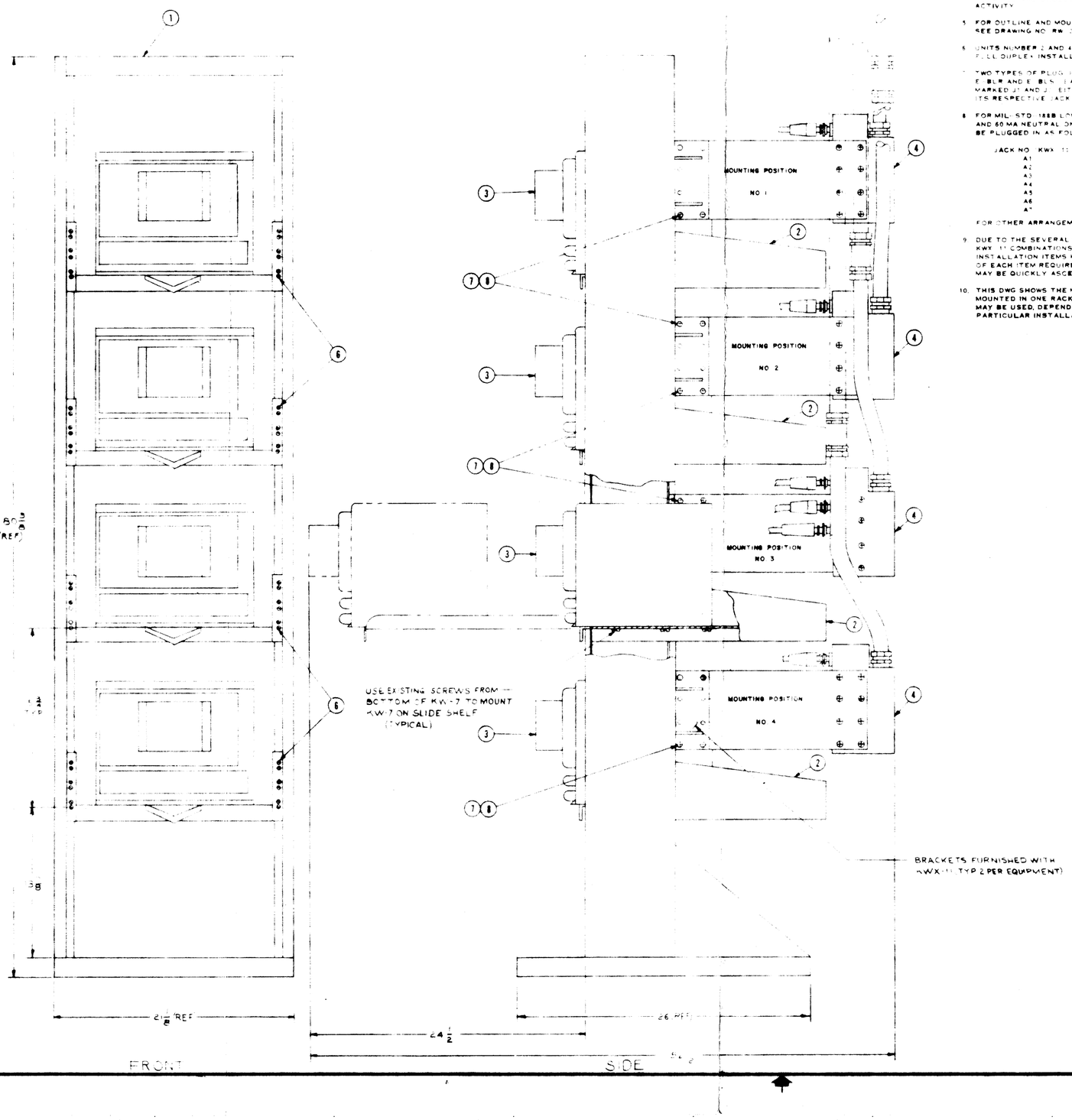
WIRING AND CABLE DETAILS
AN/UGC-20 LOW-LEVEL

STANDARD PLAN
AN/UGC-20 LOW LEVEL
RACK MOUNTED
INSTALLATION AND WIRING DETAILS

SIZE	CODE IDENT NO	NAVELEXSYSCOM DRAWING NO.	REV
F	28687	0100300	A

SCALE NONE SHEET 4 OF 4

225



NOTES

1. UNLESS OTHERWISE SPECIFIED
   TOLERANCES ON FRACTIONS ± 1/64
   TOLERANCES ON DECIMALS ± .005
   TOLERANCES ON ANGLES ± ±2°
2. REMOVE ALL SHARP EDGES AND BURRS.
3. SURFACE TREATMENT
   ITEM 4 TO BE CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416 TYPE II CLASS 1
   CHEMICALLY TREAT ALL SURFACES AFTER CADMIUM PLATING IN ACCORDANCE WITH MIL-C-[illegible] BY IRIDITING
4. ALL ITEMS OF INSTALLATION MATERIALS SHOWN ARE READILY OBTAINED AND SHOULD BE SUPPLIED BY THE INSTALLING ACTIVITY.
5. FOR OUTLINE AND MOUNTING DIMENSIONS OF TSEC KW-7 SEE DRAWING NO. RW-[illegible] E-588
6. UNITS NUMBER 2 AND 4 MAY BE OMITTED FOR FULL DEDICATED FULL DUPLEX INSTALLATION
7. TWO TYPES OF PLUG-IN P.C. CARDS ARE USED IN THE KWX-11 E BLR AND E BLS. EACH CARD HAS TWO PROJECTING TABS MARKED J1 AND J2 EITHER OF WHICH MAY BE PLUGGED INTO ITS RESPECTIVE JACK
8. FOR MIL-STD 188B LOW LEVEL INTERFACE ON THE RED SIDE AND 60 MA NEUTRAL ON THE BLACK SIDE P.C. CARDS MUST BE PLUGGED IN AS FOLLOWS:

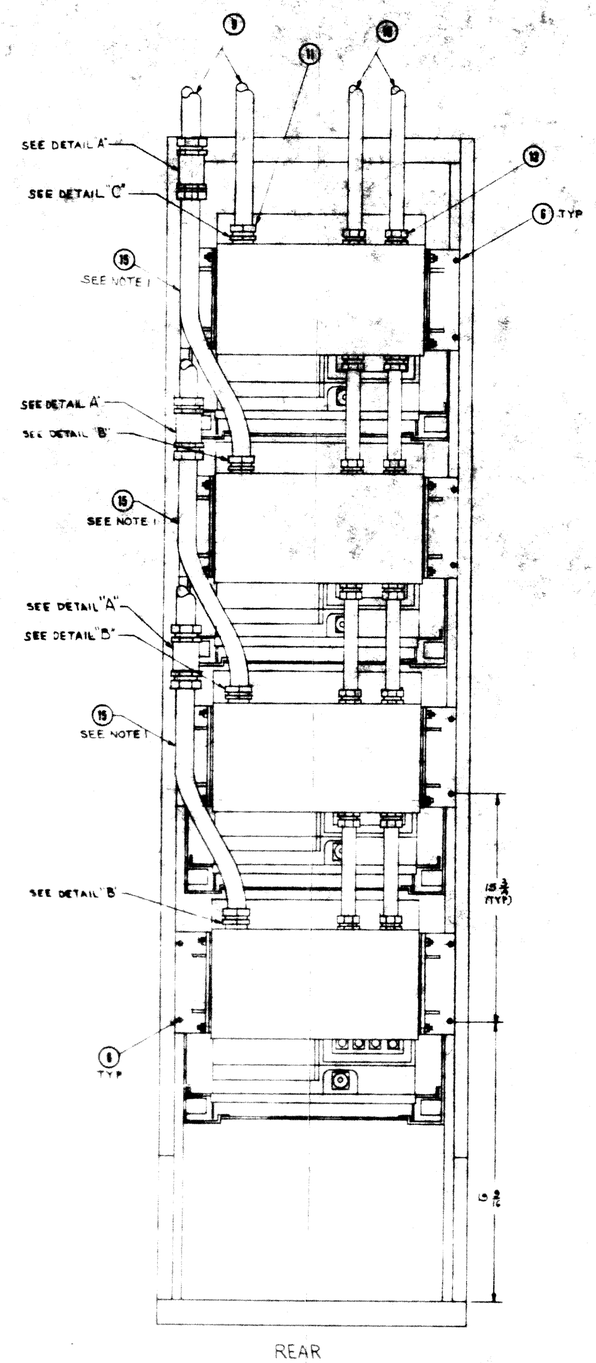
JACK NO. (KWX-11)	P.C. CARD	TAB NO.
A1	E BLR	J1
A2	E BLR	J1
A3	E BLR	J1
A4	E BLS	J1
A5	E BLS	J1
A6	E BLR	J2
A7	E BLS	J2

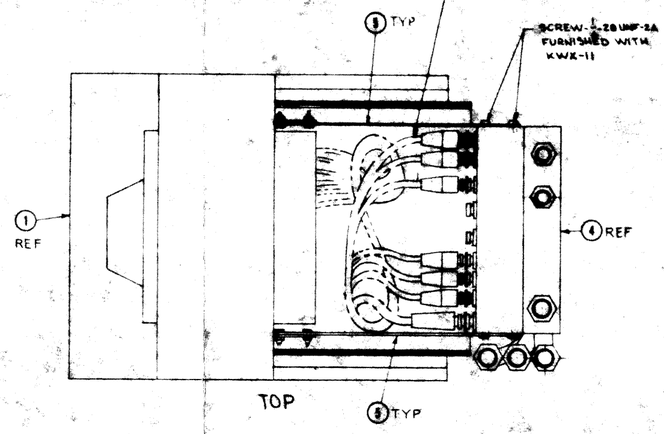
   FOR OTHER ARRANGEMENTS, SEE KAM-143B/TSEC
9. DUE TO THE SEVERAL POSSIBLE VARIATIONS OF THE KW-7 KWX-11 COMBINATIONS IN A RACK, QUANTITIES OF THE INSTALLATION ITEMS HAVE NOT BEEN QUOTED. THE QUANTITY OF EACH ITEM REQUIRED FOR A PARTICULAR INSTALLATION MAY BE QUICKLY ASCERTAINED BY INSPECTION OF THIS DWG
10. THIS DWG SHOWS THE MAXIMUM OF 4 KW-7 AND 4 KWX-11 EQUIPMENTS MOUNTED IN ONE RACK. ANY OTHER LESSER COMBINATIONS MAY BE USED, DEPENDING ON THE REQUIREMENTS OF THE PARTICULAR INSTALLATION

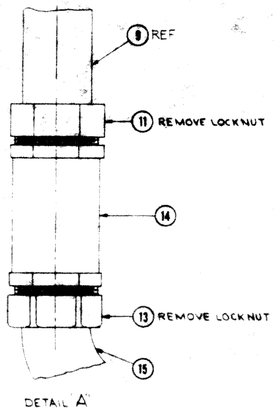
REVISIONS LTR	DESCRIPTION	DATE	APP'D
A	SEE SHEET 6 FOR "REV A" CALL OUTS	-	-

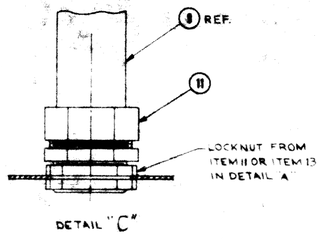
ITEM	IDENTIFICATION OR PART NUMBER	DESCRIPTION	SPECIFICATION OR MFG NO.	REMARKS
19		CABLE, POWER, 1 CONDUCTOR TYPE "TW"		
18	MIL-C-23437-1 PAIR	CABLE, ELEC. SHIELDED, 1 PAIR NO. 22 AWG		
17	MIL-C-23437-3 PAIR	CABLE, ELEC. SHIELDED, 3 PAIR NO. 22 AWG		
16	MIL-C-23437-A 6 PAIR	CABLE, ELEC. SHIELDED, 6 PAIR NO. 22 AWG		
15		CONDUIT, FLEXIBLE, LIQUID-TIGHT, IN, 20 IN LG TYPE U.A. SEAL-TITE (ANACONDA) OR TYPE L.A. LIQUATITE (ELECTRI-FLEX. CO.	COMMERCIAL	
14	5975-152-1130	COUPLING, THREADED 1 IN.	COMMERCIAL	
13		CONNECTOR, LIQUID TIGHT FLEXIBLE CONDUIT, STRAIGHT 1 IN.	T&B 5334 OR EQUAL	
12	5975-179-0097	CONNECTOR, BOX, STRAIGHT 3/4 IN	EFCOR NO. 751 DC OR EQUAL	
11	5975-179-0099	CONNECTOR, BOX, STRAIGHT 1 IN.	EFCOR NO. 752 DC OR EQUAL	
10	5975-178-1217	CONDUIT, THINWALL, EMT 3/4 IN	COMMERCIAL	
9	5975-178-1218	CONDUIT, THINWALL, EMT 1 IN	COMMERCIAL	
8	MS 20365-428	NUT, SELF LOCKING 1/4-28 UNF-2B		
7	MS 90727-5	SCREW, MACH. HEX. HEAD CAD. PLATE 1/4-28 UNF-2A x 5/8 L		
6	MS 35226-63	SCREW, MACH. PAN HEAD CAD. PLATE NO. 10-190-32NF 2A x 1/2 L		
5		BRACKET, EXTENSION		SEE SH. 5
4		TSEC/KWX-11		SEE SH. 3
3		KW-7/TSEC		
2	BS 2419	SLIDE ASSEMBLY MODIFIED	PAR METAL CO. OR EQUAL	SEE SH. 4
1	PR 197	RACK	PAR METAL CO. OR EQUAL	

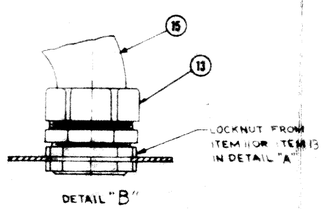
APPROVAL		NAVAL ELECTRONIC SYSTEMS COMMAND
		WASHINGTON D.C. 20390
PROJ ENG	J. Rickard	FOR GENERAL SERVICE USE KW-7/TSEC WITH KWX-11/TSEC LOW LEVEL SIGNALING (SHORE INSTALLATION) ASSEMBLY, PARTS LIST AND NOTES
SECTION HEAD	[illegible]	
BRANCH HEAD		
DIVISION HEAD		
DRAFTING SECT		
DRAWN	R. H. Rand 4-19-78	
NAVELEXSYSCOM (DATE)		SIZE F; CODE IDENT NO.; NAVELEXSYSCOM DWG NO. RW10 F 2235 A; REV A
SATISFACTORY TO		
(DATE)		SCALE; SHEET 1 OF 7





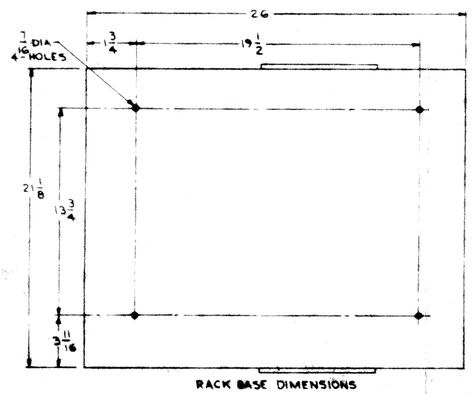






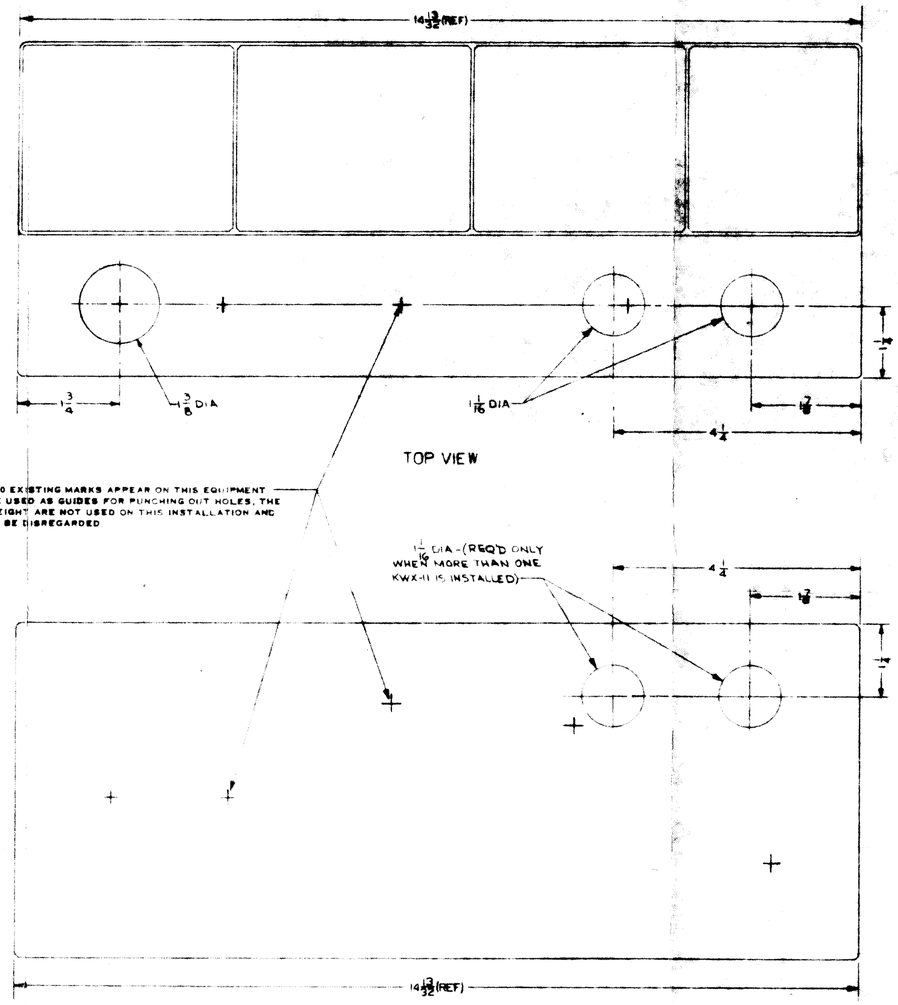
NOTE 1

ALTERNATE METHOD OF INSTALLATION ITEM 9 (1 IN. EMT) AND ITEM 11 (1 IN. EMT CONNECTOR) MAY BE USED IN PLACE OF DETAIL "A" AND "B" IF ACTIVITY HAS THE METHOD OF BENDING ITEM 9 TO THE CONFIGURATION OF ITEM 15 AS SHOWN.



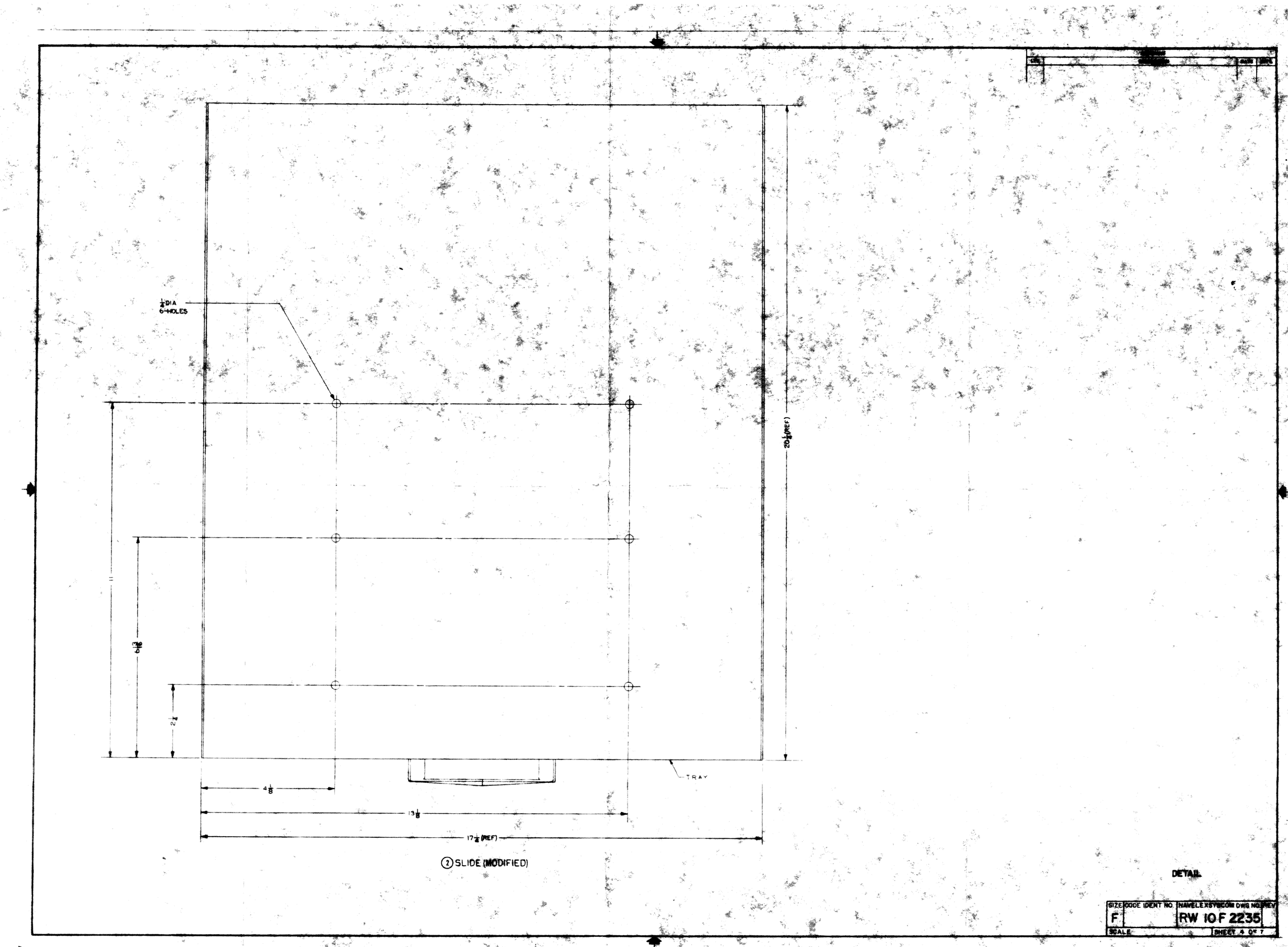
ASSEMBLY & VIEWS

SIZE	CODE IDENT NO.	NAVELEXSYSCOM DWG NO.	REV.
F		RW 10F2235	
SCALE		SHEET 2 OF 7	



DRILLING

SIZE	CODE IDENT NO.	NAVELEXSYSCOM DWG NO.	REV
F		RW 10F 2235	
SCALE		SHEET 3 OF 7	



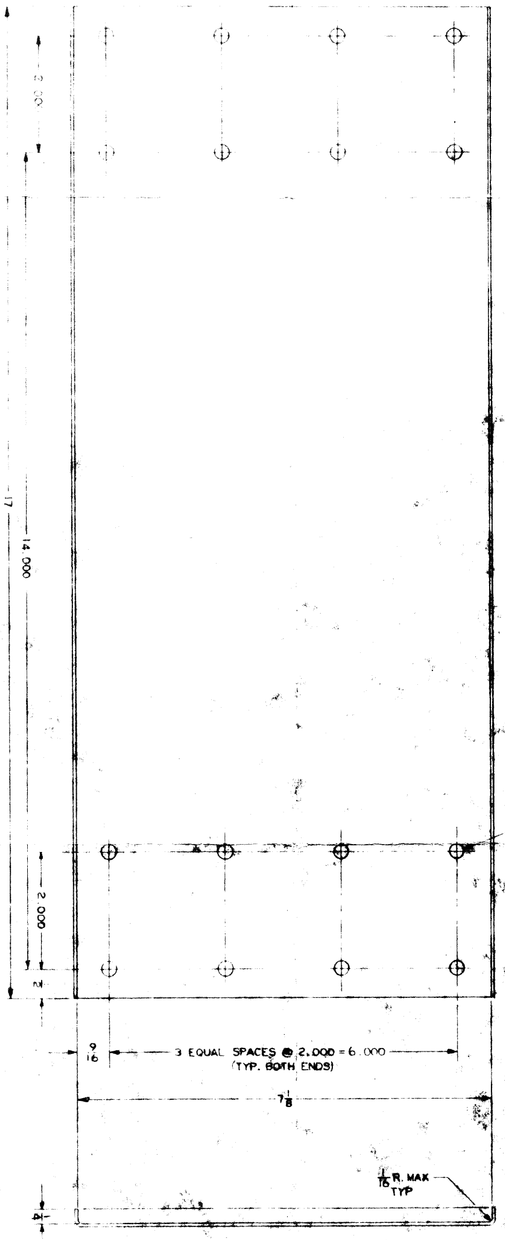
② SLIDE (MODIFIED)

DETAIL

SIZE	CODE IDENT NO.	NAVELEXSYSCOM DWG NO.	REV
F		RW 10 F 2235	

SCALE | SHEET 4 OF 7

5 H



NOTES:
1. MATERIAL – NO. (4) (GROUP) GAGE STEEL SHEET, COLD ROLLED;
FINISH AS ROLLED OR [illegible] CLASS B, FINISH B.
2. REMOVE BURRS AND SHARP EDGES.
3. CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416 TYPE [illegible].

DETAIL

SIZE | CODE IDENT. NO. | DWG NO.
F | | RW 10F 22 [illegible]
SCALE | | SHEET 1 OF [illegible]

LTR	DESCRIPTION	DATE	APPD
A	A1 - TRANSPOSED WIRE COLOR & FUNCTION. A2 - CHANGED DESIGNATION FROM "U" TO "V" A3 - CHANGED DESIGNATION FROM "NEGATIVE 6V" TO "PAR".	1/12/[illegible]	[illegible]

J1210

RED IDF

CABLE NO.	PAIR NO.	WIRE COLOR	FUNCTION
1	1	WHITE	-6 VOLTS
1	1	BLUE	+6 VOLTS
2	1	WHITE	LOOP RETURN
2	1	BLUE	LOOP IN
2	2	WHITE	STEP
2	2	ORANGE	STEP RETURN
2	3	WHITE	LOOP OUT RETURN
2	3	GREEN	LOOP OUT

BLACK IDF

CABLE NO.	PAIR NO.	WIRE COLOR	FUNCTION
	1	WHITE	RECEIVE LINE (E2 ON KW-7)
	1	BLUE	RECEIVE LINE (E1 ON KW-7)
	2	WHITE	GROUND (E3 ON KW-7)
	2	ORANGE	SPACE CONTACT (E4 ON KW-7)
	3	WHITE	TONGUE CONTACT (E5 ON KW-7)
	3	GREEN	MARK CONTACT (E6 ON KW-7)

A1

(17) 3 PAIR CABLE (MIL-C-23437-3 PR.) SEE NOTE 2

(18) 1 PAIR CABLE (MIL-C-23437-1 PR.)

CABLE 2

CABLE 1

A2

SEND BUTTON 1 — E — BLU
SEND BUTTON RETURN — F — WHT — PR
ALARM LAMP — H — ORN
SEND LAMP — J — WHT — PR
P & I LAMP — M — GRN
AUDIBLE ALARM — N — WHT — PR
NEGATIVE 6V — V — BRN
PAR — W — WHT — PR
SEND BUTTON 2 — Y — SL
GROUND — Z — WHT — PR
GROUND — D — RED — PR

A3

FUNCTIONAL REMOTE UNIT KWX-8

(16) 6 PAIR CABLE (MIL-C-23437-6 PR.) SEE NOTE 1

FUNCTIONAL REMOTE UNIT PATCH RW 10 D 2045 IF REQ'D.

(17) 3 PAIR CABLE (MIL-C-23437-3 PR.) SEE NOTE 2

POWER PANEL

(19) SINGLE CONDUCTORS TYPE "TW"

NOTE
1- IF MIL-C-23437 6-PAIR CABLE IS NOT AVAILABLE, USE 6 MIL-C-23437 1-PAIR CABLES, AS A SUBSTITUTE.

2- IF MIL-C-23437 3-PAIR CABLE IS NOT AVAILABLE, USE 3 MIL-C-23437 1-PAIR CABLES, AS A SUBSTITUTE.

TB 5

WHT — 5.0 ft — PR
ORN — WHT — PR2
GRN — WHT — PR3
WHT — PR
BRN — WHT — PR4

TB 6

WHT — PR
RED — PR

TB 4

GRN — WHT — PR

RED

TB 3

NOT USED

TIMING

TB 2

BLK — WHT — RED

BLK — WHT — RED

AC POWER TO SECOND UNIT

AC POWER

TB 1

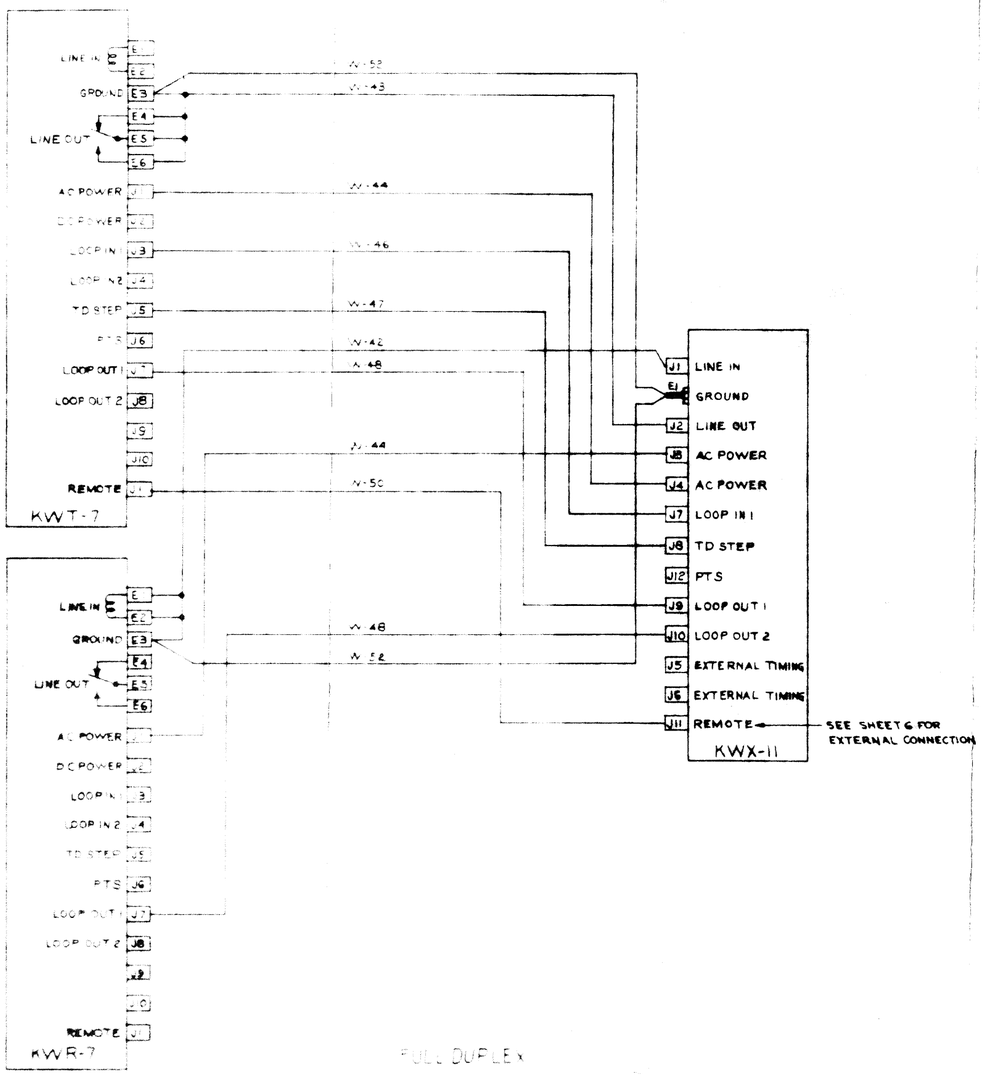
GRN — WHT — PR3
ORN — WHT — PR2
BLU — WHT — PR1

BLACK

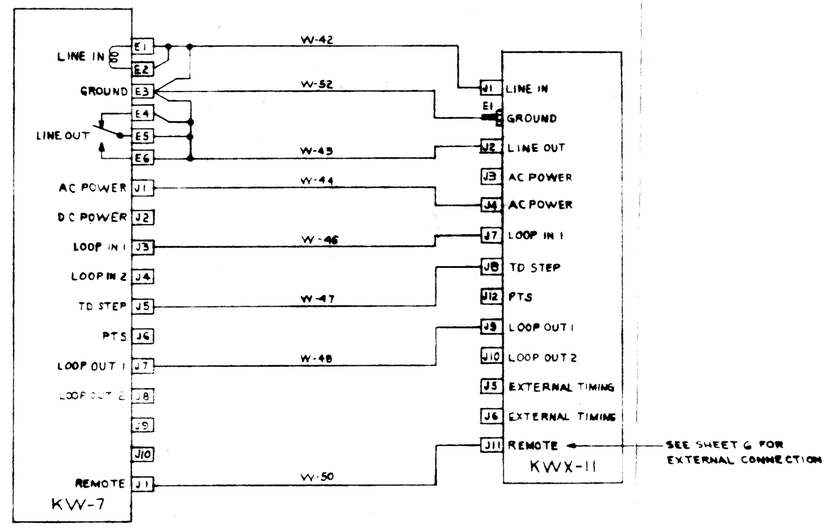
KWX-11

WIRING DIAGRAM

SIZE	CODE IDENT NO	NAVELEXSYSCOM DWG NO	REV
F		RW10F2235	A
SCALE		SHEET 6 OF 7	



FULL DUPLEX



HALF DUPLEX

INTERCONNECTION DIAGRAMS

SIZE	CODE IDENT NO	NAVELEXSYSCOM DWG NO.	REV
F		RW10F2235	
SCALE		SHEET 7 OF 7	